

SEPTEMBER 1957

COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK
AND BUS FLEET OPERATORS

CONSTRUCTION SECTION
Follows page 84



in this issue

Blanning and Cox Answer ICC Safety Questions—Three Routes to Transit Profits

United Transit Stores 'Em Outside—Trailways Shows Profit with Luxury Buses

Top horsepower only part of
work-power featured by New Power Giant trucks . . .

How Chrysler Engineering Tailors Power To Job Needs



by
**Jim
Byers**

Horsepower makes headlines . . . and justly so. However, power has to be matched properly to the work requirements of a truck if its full advantages are to be realized.

Today, the most powerful trucks of the three low-priced makes are the new Dodge *Power Giants*. And Chrysler engineers are quick to point out that this top power is individually tailored to provide each *Power Giant* engine with the most desirable power reserve for the types of work that engine will have to perform.

Extra horsepower in a truck engine offers two important advantages. First, of course, more power is available for the job—whatever it may be. Second, engine strain in handling the extra work of starting, climbing, or passing under heavy load is reduced. However, these major advantages can be lost or reduced considerably if fuel costs are so high that the extra power isn't worthwhile, or if individual engine components are not built strong enough to maintain the

power potential of the engine. Based on this yardstick, Chrysler engineers have good reason for claiming their new *Power Giant* engines are outstanding.

Take economy. The new *Power Giant* V-8 engines feature the radically different Power-Dome combustion-chamber design. This advanced design substitutes a dome-shaped combustion chamber for the old-fashioned wedge-shaped chamber. The dome has no corners or pockets where carbon can collect to rob the engine of its power. The spark plug is centrally located at the top of the dome, and larger valves, placed on opposing sides, are utilized. The result is much more efficient fuel combustion. Better still, this more complete burning of fuel produces full high-compression

power on regular gasoline.

Dodge also makes certain that *Power Giant* owners will get the kind of continued power performance they expect, by scaling the strength of engine components to the work and power load each engine is designed to handle. For example, in normal duty, the *Power Giant* 204-hp., 314.61 cu.-in. V-8 gives you a basic engine especially suited for high performance in low-tonnage models. For medium duty in the 11,000- to 18,000-lb. G.V.W. range, the basic engine is designed with extra-rugged components, like a roller-chain camshaft drive, tri-metal connecting rod bearings and a host of similar features. For still heavier hauling, tri-metal main bearings, stellited exhaust valves, and exhaust-valve seat inserts make this engine an even more durable package of power.

All six of the *Power Giant* basic engines offered this year are scaled in strength in this same manner. As a result, the truck purchaser gets the maximum work-power needed in any tonnage classification, combined with maximum operating economy and a minimum of maintenance and down-time problems.

This is the true measure of a truck engine's work-power potential. And it's a sound measure to use as a basis for investigating and comparing truck makes before you invest in additions or replacements to your present fleet.



Testing its strength on the Chrysler proving grounds, this Dodge *Power Giant* C700 C.O.E. model, with 216-hp. engine, makes child's play out of climbing a 32% test-grade.

An advertisement for DODGE TRUCKS . . . the make with The Forward Look



CENTRAL HUDSON GAS & ELECTRIC CORPORATION

SOUTH ROAD



POUGHKEEPSIE, N.Y.

The truck in the picture is used by our Gas Street Crews for the installation and maintenance of gas governors, testing, etc. Built inside the body are cabinets, drawers, work bench and cupboards for various kinds of tools and testing equipment required for the operation and maintenance of the Gas Distribution System. It is a compact unit equipped with electric lights for night work and painted outside with our standard color (school bus yellow) excepting the roof which is left natural aluminum color. The unit makes a very pleasing appearance and is highly efficient.

W. G. Gentry

Superintendent of
Buildings & Transportation

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orkshops on wheels, parcel delivery companies, dairies, bakeries, laundries, potato chip distributors, truck leasing organizations, telephone companies and other public services testify to the advantages of Olson KURB-SIDE Aluminum Bodies by Grumman. Their Savings of deadweight, corrosion, denting, gasoline, tires, brakes, clutches and springs exceed the first cost of Olson Bodies. Ask your own truck dealer or write us today for Book of Facts. J. B. E. Olson Corporation, 1740 Broadway, New York 19, N. Y.



COMMERCIAL CAR

—September 1957 • Vol. 94 • No. 1—

This Month's Features . . .

Coordination Is the Answer 66

Beginning an exceptional new series of extensive visits with the nation's leading fleets. First to be featured is Dowell, Inc., with 90 shops spread across the country

Point System Shows Mechanic Quota 69

Dowell's method helps them have mechanics when and where they're needed when vehicles move from shop to shop

Blanning, Cox Answer ICC Safety Questions. 70

Exclusive question-and-answer session clarifies safety regulations for private, for-hire and "exempt" carriers

Three Routes to Transit Profits 76

Actual reports from transit properties show you can increase efficiency, gain riders, do outside maintenance

United Transit Stores 'Em Outside 78

Oil-fired and electric heaters give low-cost results for Rhode Island property even in bitter New England winters

Trailways' Luxury Buses Show Profit 80

60 and 40-ft buses on "S Star" routes are designed for comfort, carry many "extras"—pretty hostesses too

Mobile Maintenance Boosts Shop Capacity.. 82

Louisiana Industries shows how they solved space problems with shops on wheels—and wheels on its shop equipment

Before Winter, Clean the Cooling System 84

When it comes time for adding anti-freeze, first correct faulty circulation which causes "hot" spots in the engine

Rural PU&D Radio Systems Speed Service . . . 86

Robert T. Herrin, president of Herrin Transportation Co., Houston, Texas, shows how they save time, money, nerves

Detroit Diesel Offers Four New Engines 88

Series 71 "E" and "T" (turbocharged) diesels come in 4 and 6-cyl models for trucks, buses 26,000 lb GVW and up

Borg-Warner Introduces New Fuel Injection . . 90

Feature of Marvel-Schebler system is matching of engine air requirements to fuel delivery using manifold pressure

Trailers Become State Headquarters 92

Mobile units are stationed miles from capital city during Civil Defense mock atomic bomb attack on Indiana

Autocar Offers Truck Rebuild Kit 96

Truckstell Announces Dual Drive Tandem 96

National Streamlines a Tractor 98

Demountable Spreader Ups Dump Utility 98

FWD Adds Crane Carrier 192

Departments . . .

The Overload	5	Shop Hints	74
At Your Service	9	Sept. News Roundup . . .	100
Up Front with CCJ	33	Fleet Course Calendar . .	142
Dates & Doings	40	NEW PRODUCTS	194
Fleetman's Library	44	Among the States	216
New Truck Registrations .	50	Fleet Notes	218
Laugh It Off	56	Factory Flashes	220
Bulletin Board	60	Safety Awards	222



ON THE COVER . . .

"Going somewhere? Take a bus," say the two men on the way to this month's conventions of American Transit Assn. and National Assn. of Motor Bus Operators. As a pre-convention salute, this issue has a special selection of features of interest to both transit properties and intercity bus fleets beginning on page 76.

JOURNAL

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COMMERCIAL CAR JOURNAL, September, 1957

"The quality of the product
will be remembered long after
the price has been forgotten..."



#295 JUNIOR WEST COAST MIRROR

6" x 9" clear glass, rubber rimmed
mirror head... completely ad-
justable... extra swivel assembly on
zinc plated extension arms...
simple bolt-on installation... G.M.C.
truck bracket furnished... 3 screw
tension adjustment head...
Bonderized... finished in rock hard
black-baked enamel.



#78 ARMORED CLEARANCE LIGHT

Lightweight, rustproof, heavy-duty.
Aluminum base and housing...
fade-proof plastic lens... height
1 3/8", with 2 5/32", length 5/4"...
lens and mounting holes inter-
changeable with standard equip-
ment... baked aluminum finish.
Available with red or amber lens
... #63, 3 c.p. 6 volt bulb.
Also available in 12 volt.



#382 UNIVERSAL STOP AND TAIL LAMP

Double filament bulb—3 c.p. for tail
lamp and 21 c.p. for stop light...
approved reflex lens #254...
plastic license illumination lens #3140.
Complete with plug connector,
wire leads and mounting hardware
... Bonderized... finished in black
baked enamel... overall diameter
3 1/2"... #1150 6 volt bulb. Also
available in 12 volt.

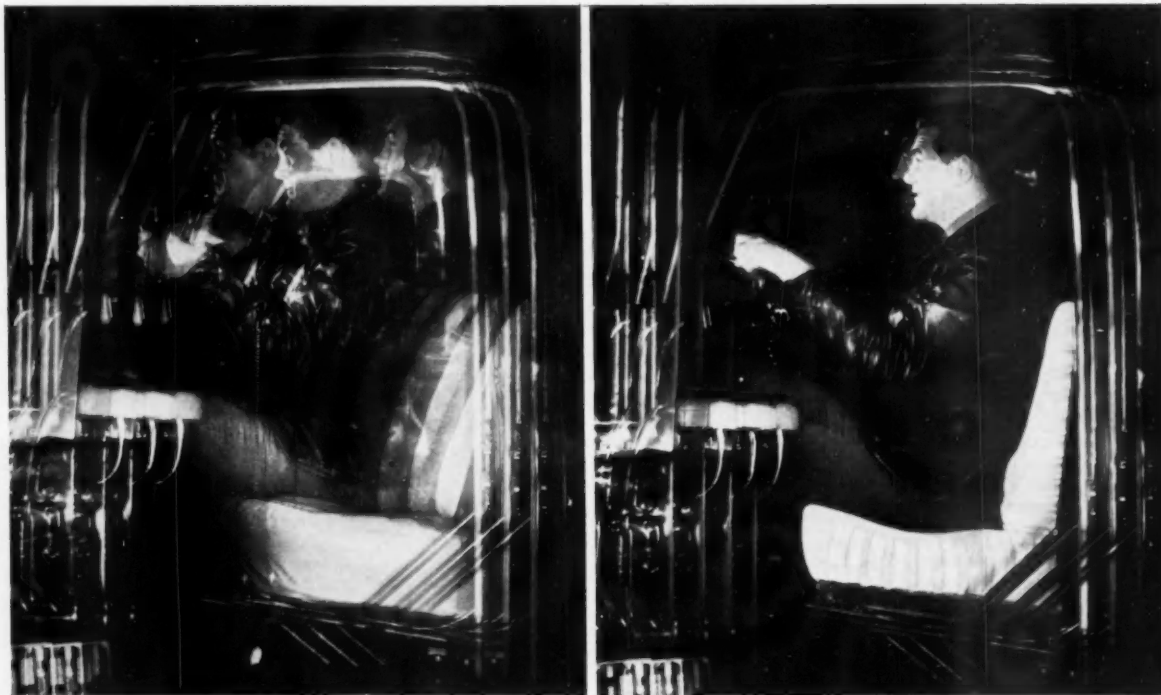


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for every
fleet
maintenance
chief!

A WONDERFUL CATALOG
OF TRUCK ACCESSORIES!
HUNDREDS OF PRODUCTS!

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YANKEE METAL PRODUCTS CORPORATION, NORWALK, CONN.

COSTLY "SHAKEDOWN" ENDED!



Camera proves how full-depth AIRFOAM seating increases driver-efficiency — cuts repairs, replacements

MULTIPLE-EXPOSURE PHOTO of truck cab with spring-and-padding type seat and back cushions. Note how vehicle's motion—every drag, jar and jounce—is *amplified* and transmitted to driver. Incurable *time-lag* in seat-spring action causes driver to bounce UP when driving controls are coming DOWN—and vice versa. Driver unconsciously tries to compensate — which tires and cramps muscles, frazzles nerves, drains driver-efficiency. This also causes considerable wear and tear on seat and back cushions.

SAME CAB, FULL-DEPTH AIRFOAM seats and backs. Springs are replaced by molded AIRFOAM with over half-a-million *fresh air cushions* to each cubic inch. Note how this *muffles* and *absorbs* the drags, jars and jounces, instead of transmitting them to driver. Also, AIRFOAM, being all-one-piece, *distributes* driver's weight over entire area, keeping his lesser motion in step with that of driving controls. Results: Fresher, happier, more efficient drivers—cushions that don't sag, snag, break down or ruin covers!

Goodyear, Automotive Products Dept., Akron 16, Ohio

You can specify full-depth AIRFOAM seats and backs as original equipment on any truck!

But be sure it's

Airfoam MADE ONLY BY **GOOD YEAR**
The World's Finest, Most Modern Cushioning



Airfoam—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

THE OVERLOAD

E D I T O R I A L C O M M E N T

To Be Effective, Safety Must Be a Crisis

DURING the course of our interview with Messrs. Blanning and Cox (see page 70, this issue) an interesting "side bar" conference developed.

Mr. Blanning was discussing his recent interviews with eight company presidents. Each represented a big, well-established, well-known common carrier. But each had run afoul of ICC Safety Regulations. Their vehicles were not doing well at successive ICC road checks.

On a man-to-man basis Mr. Blanning was seeking advice. What could be done to induce the carriers to comply with the safety regulations? What specific and perhaps additional steps should the ICC take?

The usual step has been criminal prosecution. It has been used for 20 years, but has been so uncertain, the procedure so time consuming and the penalties so inadequate that it has not been greatly effective. The "out-of-service" sticker is effective as to the particular vehicle to which it is applied, but it does not require the carrier to inspect adequately all of its vehicles. The ultimate weapon: Suspension or revocation of the operating rights of the carrier who cannot or will not adopt procedures which will assure that its vehicles are not operated so as to be a hazard to other users of the highway.

On the sticker, most of the company presidents agreed. It was both legitimate and effective. But when it came to the suspension of rights—that was a horse of a different color. There was a howl that could be heard 'round

for miles. Safety is important, the argument ran, but not *that* important!

But one of the gentlemen said, "Yes." His argument—freely translated—ran something like this:

"Look, Mr. Blanning, 'most every morning I wake up to a crisis. The phone rings and I find we've lost our biggest customer. Something has to be done about that. Another day I learn about a serious fire at one of our terminals. Something has to be done about that. Then a few days later my maintenance chief drops dead of a heart attack. Again, something has to be done.

"If safety becomes a crisis—on equal terms with our other problems—something will have to be done about that. If failure to have our trucks operate safely would probably result in loss of our operating rights, observance of the safety regulations would be of equal importance to top management and they would be observed."

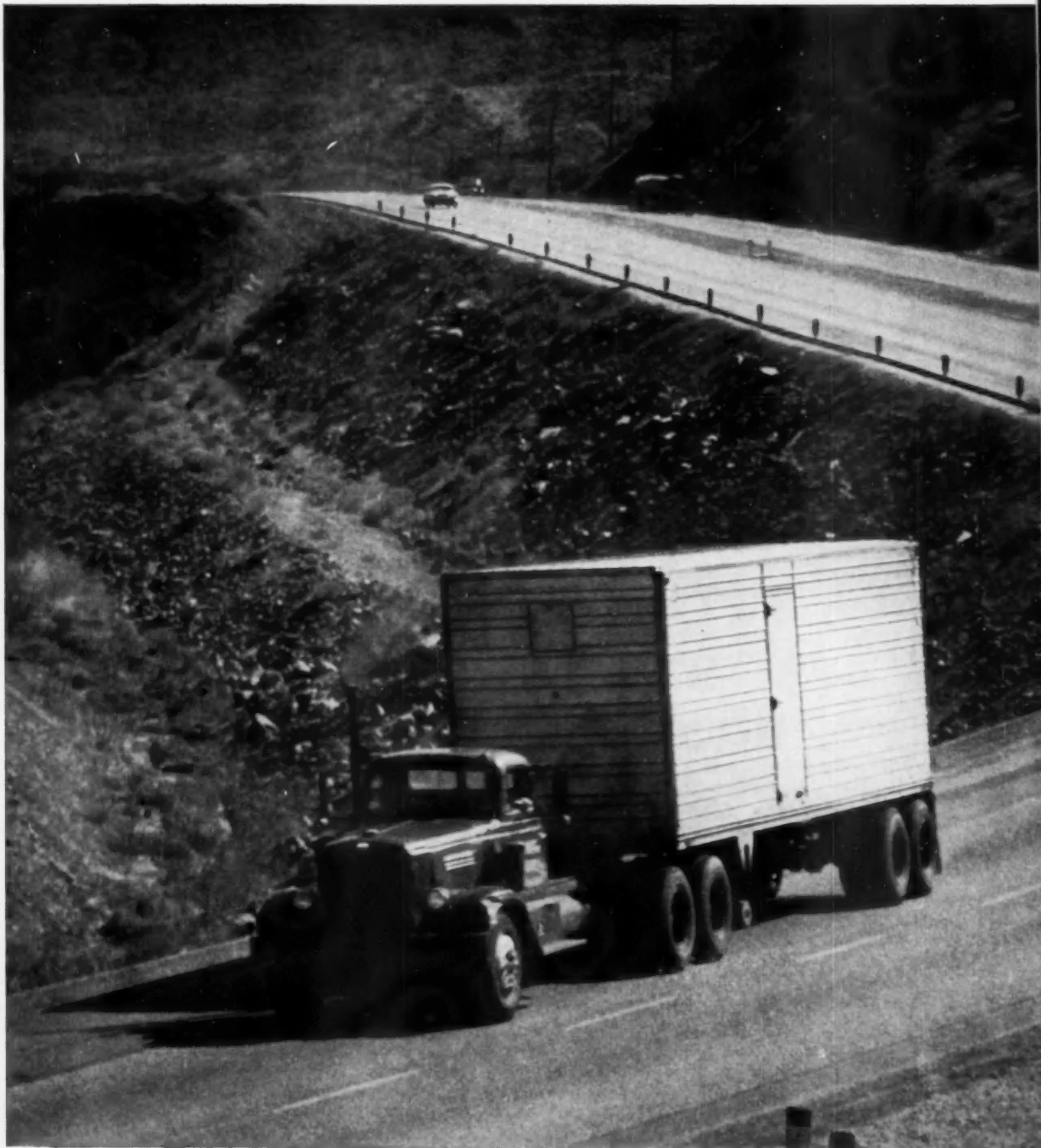
Obviously nobody wants to go that far, least of all the ICC. Its job is to reduce accidents, not to put people out of business.

But someday it may have to act. There are laws on the books that are designed for your safety, your economy and the welfare of America. They are not being met.

You can do the job, or the government may have to do it for you. It's as simple as that. Logically it's your move. Make safety a crisis at top management level. And make it just as real, just as vivid, just as colorful as the loss of a big customer, a fire or a death.

Bart Rawson
Editor

How to get more miles for yo




TEXACO

your maintenance dollar

Fleet operators all over the country have been finding that Texaco lubricants are helping them win the costly fight against wear and replacement. Here's how:

1. **Wheel bearings** protected by *Texaco Marfak Heavy Duty 2* give longer life. *Texaco Marfak Heavy Duty 2* stays in the bearings, even under the toughest conditions. And it doesn't require a seasonal change.
2. **Chassis** get top protection against rust and wear with *Texaco Marfak*, the grease that seals out dirt and moisture, performs its lubricating job for extra hundreds of miles.
3. **Engines**—whether heavy duty gasoline or diesel—run better, and for longer periods between overhauls, when lubricated with *Texaco D 303 Motor Oil HD*.
4. **Gears** give more miles of service at lower maintenance cost when protected by *Texaco Universal Gear Lubricant EP*.



You get all-around service from *Texaco Marfak Heavy Duty Special 2*—one lubricant for all chassis, wheel bearing, water pump and other jobs. *Texaco Marfak Heavy Duty Special 2* is a lithium-base grease which pumps evenly and lubricates effectively even at extreme low temperatures.

There is a full line of Texaco lubricants for your operation. To select the proper ones, call the nearest of more than 2000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street,
New York 17, N. Y.

Lubricants and Fuels

FOR TRUCK AND BUS FLEETS

**This ring
does more for you
than any other
introduced
in the
last
decade!**



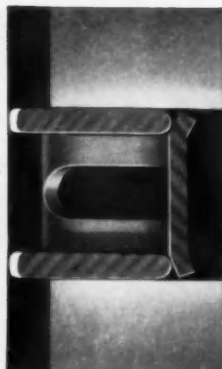
SS-50U
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No. 2,789,872

TWO FEATURES MOST WANTED BY MECHANICS



Proper axial pressure of the side rails against sides of grooves assures side-sealing—even under high vacuum conditions of deceleration.

Circumferential abutment type design makes the ring independent of the contour and depth of piston groove. It exerts its pressure uniformly... conforms more readily to the bore. Chrome-plated steel side rails for more than double normal life. They seat instantly.



**Sealed Power's New
Stainless Steel Oil Ring**

No other oil ring holds full tension at engine operating temperatures, hardens in use. This oil ring will not sludge, will not corrode. All these features are Sealed Power exclusives because only Sealed Power uses austenitic stainless steel!

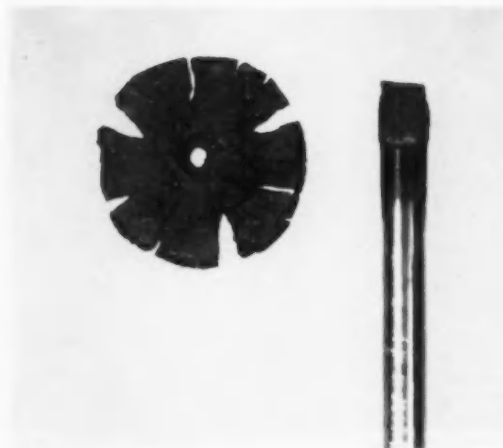
The Stainless Steel Oil Ring is featured in KromeX sets for engines which require super oil ring performance.

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING!

BEST FOR RE-BORE!



"Wha' Done It?"

A LEADING automotive valve manufacturer's engineering department made a visual and metallurgical examination of this valve, reports that the failure was due to impact fatigue. This means that the valve was seating at a speed or velocity that caused pounding beyond the limits of the metal.

Some fleet operators have a tendency to blame this type of failure on excessive engine speed. While engine speed is a contributing factor, this type of failure has occurred in engines that were never run at excessive rpm. One of the most prominent causes of this type of valve failure is excessive tappet clearance. For this reason, it is important that the service man maintain factory recommended valve clearances rather than change the engine governor which could just possibly cause the engine to lug under load conditions.

Limit Diesel Idling

WITH THE approach of cool weather, drivers should be instructed not to allow diesel engines to idle for any length of time. Long periods of idling cause operating temperatures to drop so low that the fuel may not burn com-

pletely. This will cause carbon to clog the injector spray holes and piston rings. Raw fuel will wash lubricating oil off cylinder walls and dilute crankcase oil so all moving parts will suffer from poor lubrication. If you're not using the engine, shut it down.

More than "Scuffing" Needed

IT HAS BEEN observed that some fleet operators are merely "scuffing" the original color coats before refinishing or lettering. This practice can result in a film thickness which is too great to withstand the normal expansion and contraction of the panels and of the finish itself. Conditions commonly experienced with an excessive film thickness are—cracking, checking, peeling, alligatoring, crazing, etc. In addition, if moldings are not removed, careless spray technique can cause "bridging" along the moldings.

When refinishing, the following precautions should be observed:

- Original color coats should be sanded down or stripped so that the final finish will not exceed maximum allowable thickness.
- If original color is a "bleeder" and is not entirely removed, a sealer should be applied prior to the application of the new color coats.
- If moldings are not removed for the refinish operation, care must be exercised to make certain the new color coats do not "bridge" between the panels and moldings. Unsupported film in such "bridges" fractures easily and leads to peeling and flaking.

Strain Breaks Panes

WHEN TAKING out the old window glass, be careful not to mar or damage any fittings, paint or mechanical parts. Try to find the cause of the breakage. If rust or some other obstruction in the frame or channel has strained the glass, remove the cause of the strain.

When cutting the new glass to fit, take care not to chip the edges. Sharp edges will injure the weather stripping. Edges that rest in the frame should be sealed to reduce the chances

(TURN TO PAGE 12, PLEASE)

Good brakes are no accident



This Wagner test truck is equipped with a "fifth wheel" to operate instruments that measure exact stopping distances.



Preparing a hydraulic brake assembly for dynamometer-testing in the Wagner Research Laboratory.



Wagner's St. Louis area Proving Grounds, where regular test runs are made to check brake performance.

Wagner Lockheed
the best known name in brake service



....

QUALITY
 begins w
 material

Check st
 quality c
 througho
 line.

LABOR
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 are mad
 teristics

PROVIN
 Wagner

...BE SAFE...BE SURE!

**Wagner's laboratory, proving grounds,
and over-the-road testing
mean better brakes...safer vehicles.**

QUALITY CONTROL of Wagner Brake Products begins with the design, when quality standards of material and manufacture are specified.

Check stations, testing and inspection stations for quality control are maintained at frequent intervals throughout every Wagner production and assembly line.

LABORATORY TESTING of Wagner Products is done in Wagner's modern St. Louis laboratory. Tests are made to determine exact performance characteristics of all Wagner automotive products.

PROVING GROUNDS—operated by Wagner enable Wagner engineers and drivers to conduct an endless

schedule of testing, checking the efficiency and wear of Wagner brakes and component parts.

ROAD TESTING—in actual service on mountain road runs at Wagner's Proving Grounds at Jennerstown, Pa.,—plus rigorous road tests at the Wagner Proving Grounds in the St. Louis area—all contribute to *better brakes and safer trucks.*

You'll find that all Wagner Products—Wagner Lockheed Brake Parts, Fluid, and Lining—are tops for quality.

For details on this complete line, write for Catalog AU-1. There's no cost or obligation to you.

You can depend on WAGNER QUALITY because Wagner Products are used as original equipment by manufacturers of cars, trucks, buses and trailers.



**WAGNER LOCKHEED BRAKE PARTS,
FLUID AND LINING...AIR BRAKES...AIR HORNS...
TACHOGRAPHS...NOROL...ELECTRICAL PRODUCTS**



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6470 Plymouth Ave. • St. Louis 14, Mo.
(Branches in principal cities in U. S. and in Canada)

Please send us a copy of Catalog AU-1 on Wagner's complete line of brake service products.

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FIRM NAME _____

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CITY & STATE _____



City of Madison, Wisc., reports on full year's fleet-washing with Oakite Foam-Spray Unit:

**"Washing over 300 vehicles
in only 1/3 former time!"**

Vehicles in the municipal garage in Madison, Wisconsin, are always checked out sparkling clean. Whether they come in for greasing, repairs, or just a change of oil, they get a quick washdown with the Oakite Foam-Spray Unit charged with Oakite No. 70 detergent. It's part of the regular schedule, like checking tires.

It wasn't this way when washing was done by bucket and brush. The Oakite Foam-Spray Unit cuts cleaning time by a full two-thirds . . . makes it possible to incorporate a wash in the regular schedule with no increase in manpower.

And here's the extra pay-off. At year's end, with vehicles washed better and more frequently, the records show a *lower* total cost for detergent.

Find out how the Oakite Foam-Spray Unit can cut *your* fleet-washing costs. Talk to your local Oakite man, or write for details to Oakite Products, Inc., 52G Rector Street, New York 6, N. Y.



Export Division Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

CCJ AT YOUR SERVICE

Continued from Page 9

of cracking from strain. Edges that are exposed should be rounded off smoothly to avoid cutting the channel strip or hands. Replace weather stripping or channel tape that shows signs of wear.

Check all window lift mechanisms to make sure they work easily, don't rattle and won't strain the glass. Check the door lock, striker plate and door alignment and reset door so that it will close with a gentle push rather than a slam.

Is The Heater Ready For Cool Weather?

AS A PART of cooling system maintenance, mechanics should consider driver comfort and safety. Vehicle heater and defroster system should be checked for efficient heating and defrosting action. Be sure that the dampers are operating properly and that there are no air leaks in the system. Also, test the blower motors for satisfactory operation.

Examination for air leaks at all seams and joints should be thoroughly made. Leaks will not only permit hot air in the system to escape but also will allow fumes from the engine compartment to enter the cab. Also seal openings around the fire wall or floor pan with dum-dum or masking tape.

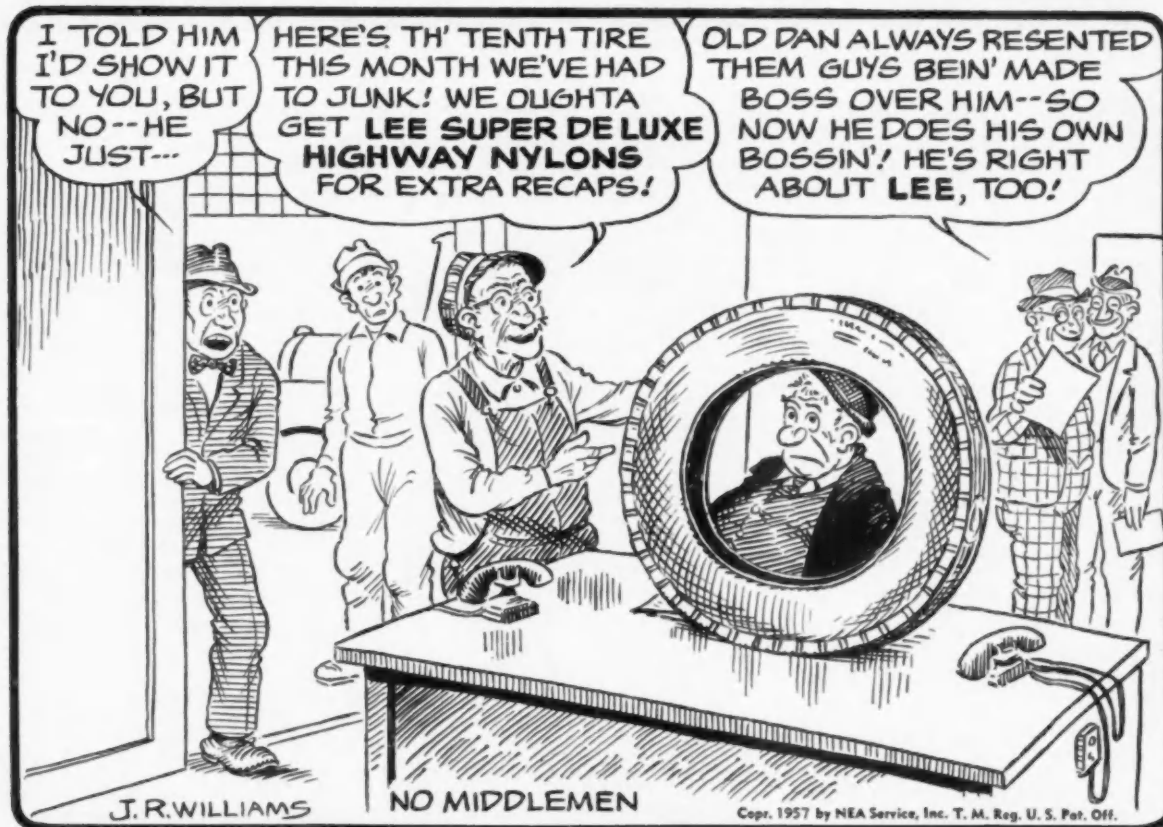
Loadmaster Valve and Spring Height

MAINTENANCE of correct intake and exhaust valve and valve spring heights after valve reconditioning is imperative to insure proper hydraulic valve lifter operation and to provide the spring tension necessary to insure full valve closure.

Correct intake and exhaust valve stem installed heights for the "Loadmaster" 322 cu in. truck engine are 1½ in. (1.503) as measured from the rocker arm cover gasket rail. The valve stem may be ground off not to exceed .040 in. (stem hardened .060) to meet this requirement.

To check intake valve spring height, measure from the bottom of the outer spring counterbore in the head to the top of the spring cap. Distance should be 1 9/16 in. (1.560). If necessary, add a shim equal to the difference between the actual and specified heights under the outer spring in the head counterbore.

Exhaust valve spring height should be 1 13/32 (TURN TO PAGE 16, PLEASE)



YOU GET MULTIPLE RECAPS with Lee Super DeLuxe Highway Nylon Tires

The Lee Super DeLuxe Highway Nylon Truck Tire *costs less per mile*. That's because its premium features result in long original mileage and greater carcass strength for multiple recaps.

The extra-strong, extra-tough nylon cord provides maximum protection against impact bruises, blowouts and moisture damage. Nylon gives you a cooler-running tire, too, because there is less bulk. All cords are treated by Lee's exclusive double-dip Flexlok process which reduces heat, resists the effects of repeated flexing, and makes cord separation from the rubber bond practically impossible.

Every component of the tread design contributes to maximum mileage, better traction and cooler running. Only

the best grade of Smoked Sheet natural rubber is used. The flat contour and the deep tread put more rubber on the road to distribute the load and increase tire life. Angular center-tread grooves and the bars between the ribs help prevent little cuts from becoming big cracks.

Lee Super DeLuxe Highway Nylons—tubed or tubeless—are an outstanding tire buy! Write direct, or look for "Lee of Conshohocken" in the Yellow Pages of your Telephone Directory.

The complete Lee line, shown below, includes a tire which will lower *your* operating costs by giving longer life, more recaps. Let us prove it to you.



We rate AC Commercial Sp



EDWIN M. FREW, Fleet Superintendent for the Menzie Dairy Company, says, "AC's stand up better under stop-and-go delivery conditions."



P. E. LOFSTROM, Director of Personnel and Safety, reports that "AC's were selected over other makes because they deliver long, troublefree service."

ACTION
starts with



Spark Plugs "grade A!"



***For 21 years the Menzie Dairy Company
has specified "AC Spark Plugs only"
in their 237 vehicles.***

Retail and wholesale milk delivery constitutes as tough a test of spark plugs as could be devised. Stop-and-go driving, door-to-door delivery, long distance hauling are all included . . . and much of the driving is over very rough roads in the area surrounding McKeesport, Pa.

Yet for twenty-one years, the Menzie Dairy Company has specified AC Spark Plugs exclu-

sively—and for another twelve have used only AC Oil Filters.

These facts are typical. Literally thousands of fleet owners across the country specify AC Hot Tip Spark Plugs for extra durability and economy of operation.

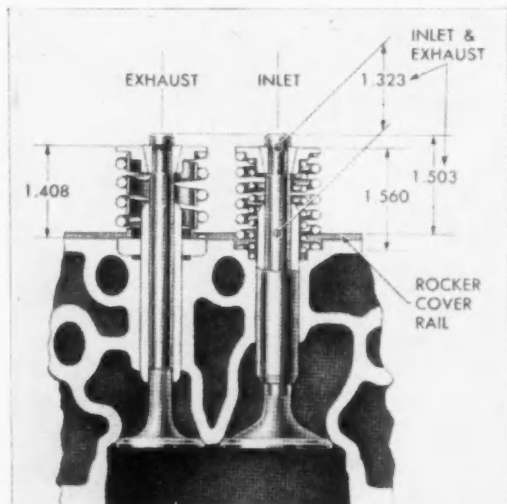
Why don't you have them installed in your fleet now and find out what you save?

AC SPARK PLUG



THE ELECTRONICS DIVISION OF GENERAL MOTORS

Continued from Page 12



in. (1.408) measure from the top of the rotator to the top of the spring cap. If height exceeds

this dimension, add a shim equal to the height difference either under the exhaust valve spring or beneath the rotator.—Courtesy of Chevrolet Service News.

Normal Thumping in Nylon Tires

AFTER A VEHICLE with nylon cord tires has been left standing overnight or for a long period of time, a thumping similar to the "out of balance" sound may be heard. This is a normal condition which will probably disappear after the tires have warmed and flexed from driving. This condition is due to "lazy" nylon cords which have temporarily "set" to the flat shape of the tire where it has rested on the ground.

Torquing Spark Plugs

WE HAPPENED to walk in on a heated argument where the shop foreman claimed the mechanic did not torque the spark plugs properly. The mechanic promptly challenged the foreman by saying "Oh yeah, let's see you torque them." As a bystander, I could see where the mechanic had a point. It was just about impossible to get a torque wrench on the plugs.

Proper torque is important. If the spark plug is not tightened enough, the plug may run hot and cause pre-ignition in the cylinder. The heat

(TURN TO PAGE 20, PLEASE)

A
TREAD
TO SUIT
YOUR
NEEDS

... that's what you get with

HAWKINSON TREADS

Because

- RUN COOLER • LAST LONGER
- GIVE BETTER TRACTION
- BETTER CAR PERFORMANCE

**CURED
THE WAY
THEY
RUN**

Authorized **HAWKINSON TREAD** *Service*

In Principal Cities U. S. A. Canada and Foreign Countries

Minneapolis • **PAUL E. HAWKINSON CO.** • Minnesota

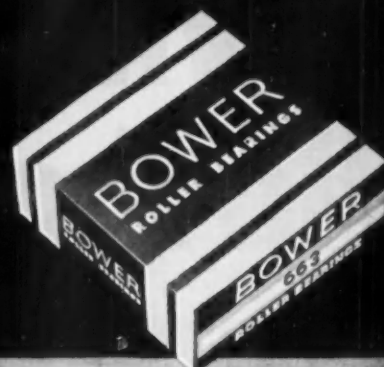
...it will
pay you
well

Bower roller bearing design features save trouble on the road...time in the shop...and money for you. For example...

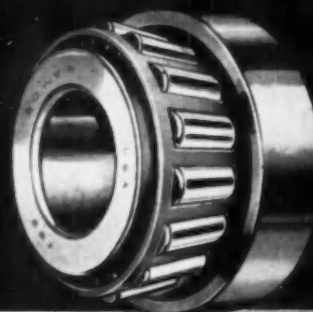
Bower tapered roller bearings hold adjustment and pre-load longer...because *Spher-O-Honed* design gives you roller heads ground to the operating contour that other tapered bearings must acquire through run-in. Bower exclusive higher flange design provides large, two-zone contact for roller heads to improve roller alignment, cut down wear and resultant end-play.

Bower straight roller bearings carry maximum loads with less maintenance because *Two-Lip* design—available at no premium in Bower straight roller bearings—increases rigidity and keeps rollers in proper alignment at all times.

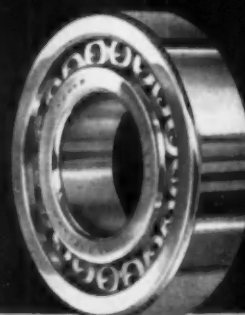
It pays to specify Bower roller bearings for your vehicles. Bower tapered roller bearings, straight roller bearings and journal roller assemblies are available through most bearings suppliers.



BOWER



SPHER-O-HONED
TAPERED ROLLER BEARINGS



TWO-LIP
STRAIGHT ROLLER BEARINGS

BOWER
roller bearings

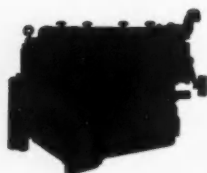
FEDERAL-MOGUL SERVICE
DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.



What makes the GMC the top Money-M

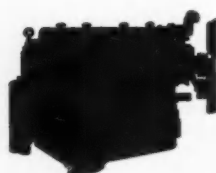
We took...

OUR NEW SUPER-ECONOMY DIESEL ENGINE—that features new four-valve combustion chambers fed by new 60-mm. injectors to produce the best fuel mileage in 2-cycle Diesel history.



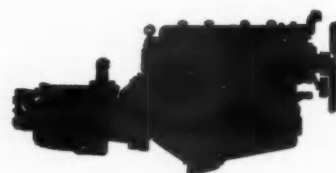
...we added...

A NEW, FUEL-SAVING HYDRAULIC FAN—that works only when the engine needs it, or about 50% of the time. That cuts your fuel bills *another* 5%.



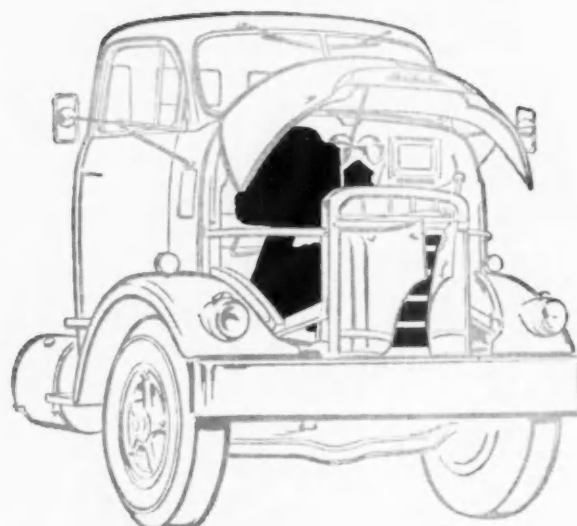
...we offer it with

A CHOICE OF TIMESAVING TRANSMISSIONS—any one of them giving you top acceleration from stops and exceptional performance in rolling country or against headwinds.



...we put it all in

A CAB WITH IDEAL 72-INCH DIMENSIONS—that lets you haul the biggest capacity 35-foot square-nosed trailer—makes this GMC a cinch to jockey in close quarters.

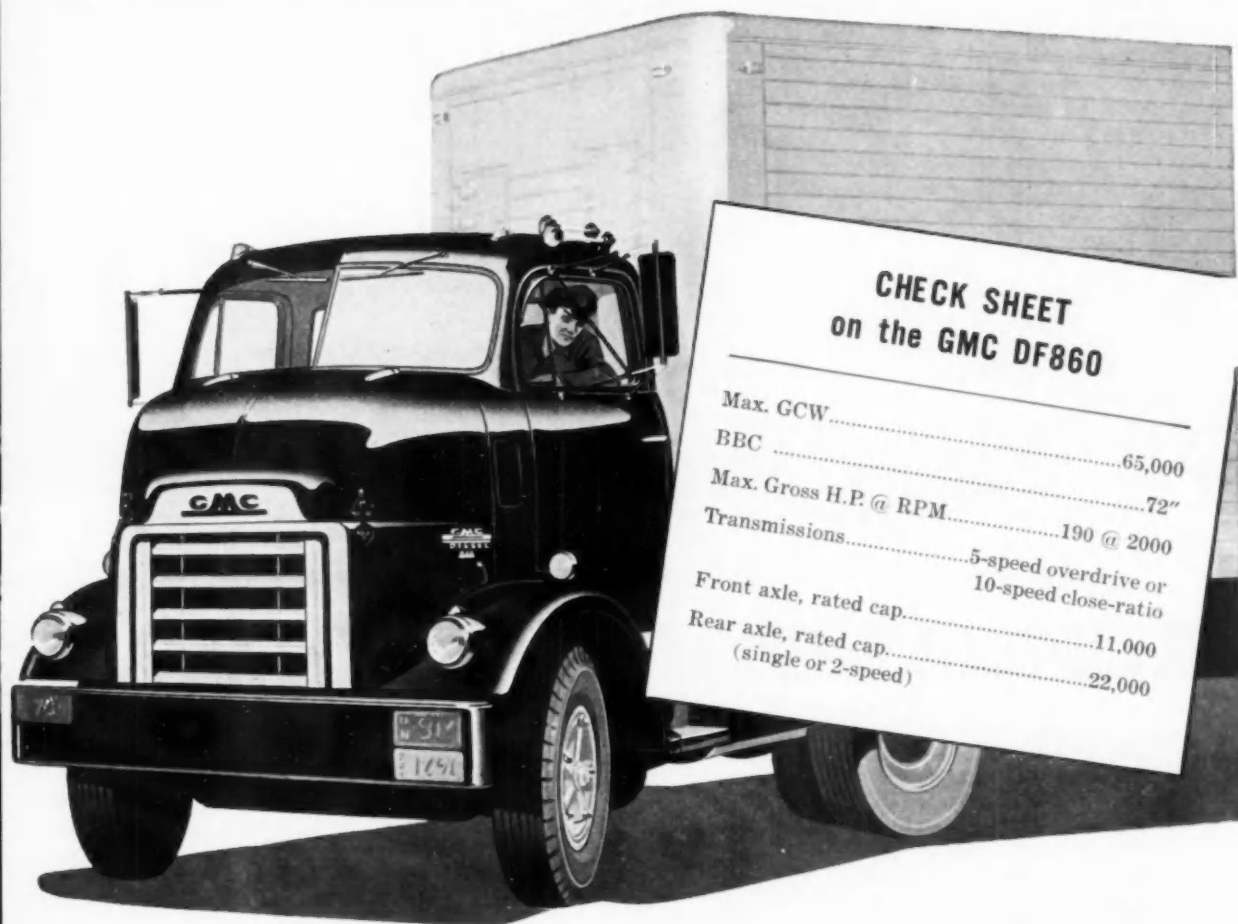


...and we give you

WIDE-OPEN ENGINE ACCESSIBILITY—thanks to GMC's exclusive "Stripaway" feature that puts any vital engine part within easy reach—without hoisting the entire cab to change a spark plug!

GMC DF860

Maker of them all?



LITTLE WONDER top fleets—from coast to coast —
have acclaimed the GMC DF860 "finest highway
hauler on the road today"! See your GMC dealer!

GMC TRUCK & COACH—A General Motors Division

GMC Money-Makers

1/2 TO 45 TONS

Continued from Page 16

from the electrodes passes up the body of the plug through the insulator. From the insulator it passes through the shell and through the gasket to the cylinder head where the heat is taken away by the cooling system. If the gasket isn't compressed tightly, the heat doesn't escape from the plug fast enough, resulting in tip getting hot enough to ignite the fuel air mixture.

If the plug is tightened too much, the gasket may be cracked or broken or the threads may become stripped. So, there is a fine line between too tight a plug or one that is too loose. Also, it is most important that a new gasket be used each time a plug is installed.

If it is impractical to use a torque wrench, here is a safe procedure to follow in installing plugs. After cleaning the threads, tighten the plug as far as it will go with your fingers. Then with the proper socket wrench, tighten 18 mm plugs $\frac{1}{2}$ to $\frac{3}{4}$ of a turn, 14 mm plugs require a

$\frac{3}{4}$ turn and 10 mm plugs should be tightened $\frac{3}{4}$ to 1 turn.

One way to visually check the effects of proper spark plug torque is to install an oscilloscope type tester on a vehicle and observe the projected pattern, then, purposely overtorque one plug and watch the projected pattern change.

Dodge Automatic Choke Erratic Operation

ACCORDING to a recent Dodge Service Bulletin, some sticky or erratic automatic choke operation has been encountered. In most cases, it was found that the lower end of the operating rod was rubbing on the wall of the choke pocket in the intake manifold.

To eliminate this condition, loosen both attaching screws and shift the choke assembly to a slightly different position, preferably toward the carburetor to provide clearance for the operating rod, and retighten the cap screws. In extreme cases, it may be necessary to enlarge the holes in the choke assembly to obtain the proper position on the manifold.

An important item that should be checked at this time, that could affect the proper operation of the automatic choke, is the exhaust manifold heat control valve. To quickly check the operation of this valve, the following observations should be made; (1) that the heat control valve rotates freely either when hot or cold, (2) that

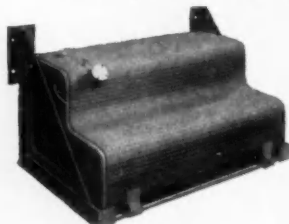
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MOVE THE WEIGHT

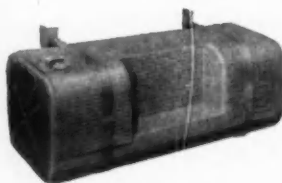
FORWARD

With any one of the three Snyder Safety Payload Tanks illustrated. All are designed and engineered to be mounted to the frame directly below the cab. This position transfers most of the weight of the tank and its contents forward

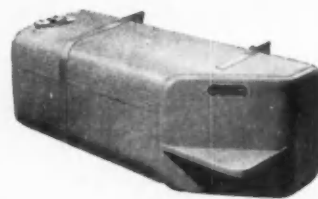
to the front axle, thus more payload. Payload Tanks are approved by Underwriters Laboratories, Inc. label or reexamining services and also meet the specification of the Bureau of Motor Carriers of the I.C.C.



FULL STEP TANK
Capacity 30 to 70 Gallons



CENTER STEP TANK
Capacity 38 to 70 Gallons



**PAYLOAD TANK
CORNER STEP**
Capacity 35 to 64 Gallons

SNYDER TANK CORPORATION

P.O. BOX 14, BUFFALO 5, N. Y. • P.O. BOX 3162, BIRMINGHAM 1, ALA.

SNYDER SAFETY TANKS



Beveled Chrome-Vent Rings in Hastings 2C Chrome sets are covered by U. S. Patent Nos. 2148997, 2511874, 2565042, 2712971

Re-ring, re-bore or re-sleeve... Chrome-Vent will seat faster, last longer!

This beveled Chrome-Vent oil ring is *why* Hastings 2C Chrome Sets seat so much faster, control oil so much longer—in any engine.

The difference is Hastings' patented, *beveled chrome* rail. With less contact area to wear-in, it seats 3 to 4 times faster than any other chrome ring. And because it makes immediate *fineline* contact with the cylinder wall, you get positive, precision oil control right now—and for the life of the job.

In addition, the thick chrome cap extends *around* the segment, to give at least 3 times greater chrome wearing surface. And with the lighter inner spring, made possible by beveled design, Chrome-Vent makes gentle, soft-pressure contact with any cylinder wall—tapered, out-of-round or re-bored.

When you install Hastings rings—the product of replacement specialists—you can be sure of a good job and positive performance.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Hastings Ltd., Toronto

Piston Rings • Casite • Wear Reducer • Filters • Spark Plugs

Tough on oil-pumping
Gentle on cylinder walls



CONVENTIONAL CHROME RAIL

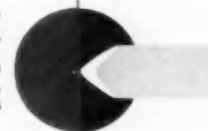
originated by Hastings...
now replaced by Hastings
exclusive Beveled Chrome



Beveled Chrome-Vent

BEVELED CHROME RAIL

makes fineline contact with
cylinder wall for a faster seat.
Less area to wear-in means
less time to break-in.



HASTINGS

**Beveled Chrome-Vent
Piston Rings**

First 50 all-aluminum flatbeds

Working closely with Trailmobile and P-I-E, Kaiser Aluminum engineers develop a lightweight—yet stronger than ever—welded aluminum trailer

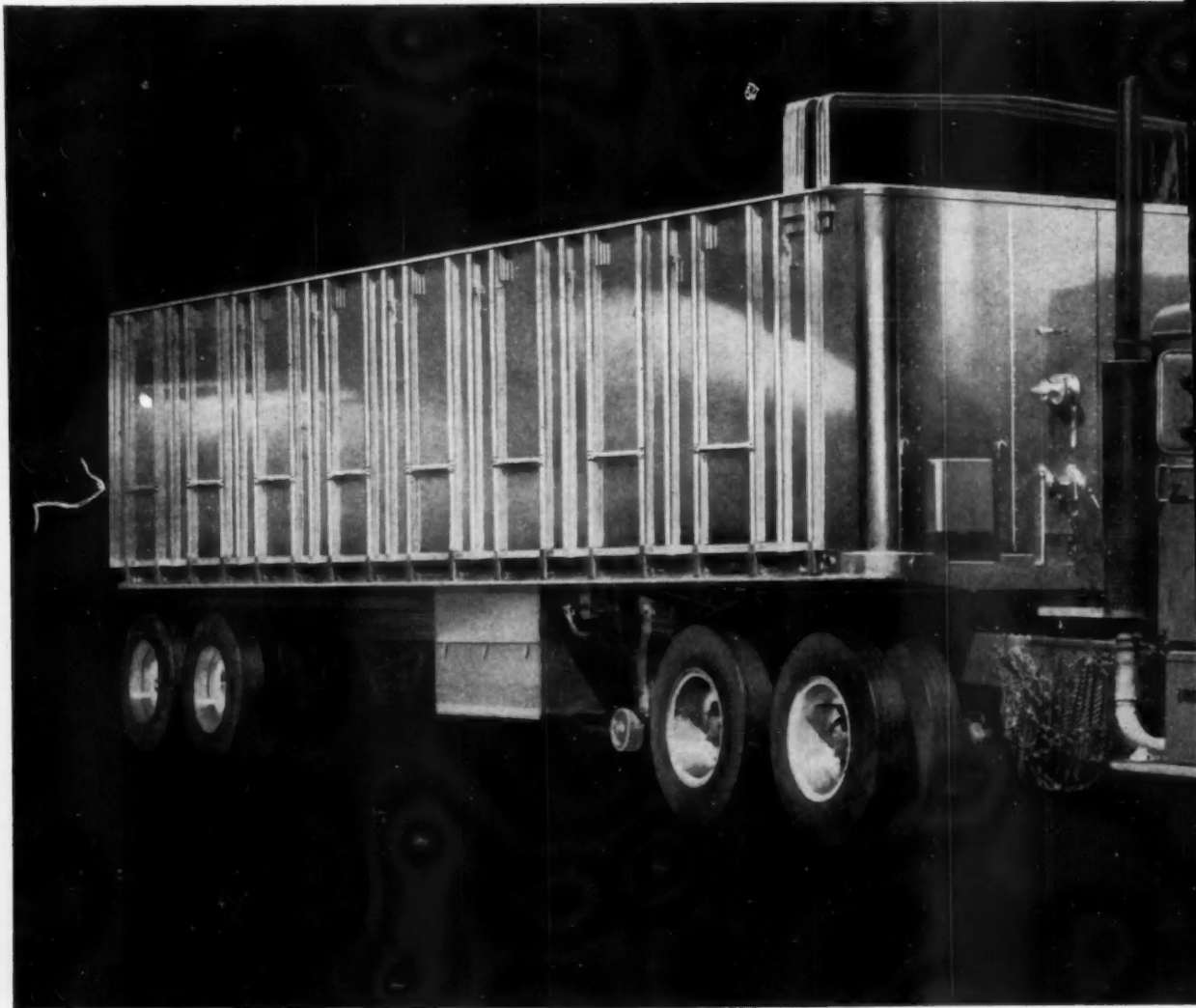
Weighing only 9,460 pounds, this radically new aluminum trailer assures a *profitable payload boost* because it is a full ton and a half lighter than comparable steel versions!

It's one of 50 Kaiser Aluminum-designed flatbeds recently purchased by P-I-E from Trailmobile to transport heavy machinery and other bulky shipments along P-I-E's rugged western routes. Built to standard size specifications, this sleek aluminum trailer features the very latest advances in metallurgy and design.

Take its exceptional strength, for example.

This was achieved through the use of Kaiser Aluminum's special high-strength, weldable 5083 alloy ... which in turn permitted the welding of all structural components into an integral unit. Because aluminum is resilient and resists fracturing, cargo safety is protected every mile of the way.

Among its other advantages: interchangeable aluminum side panels that won't rust, rot or warp ... tarp box amidship for quick conversion to van type trailer ... aluminum landing gear and air-ride



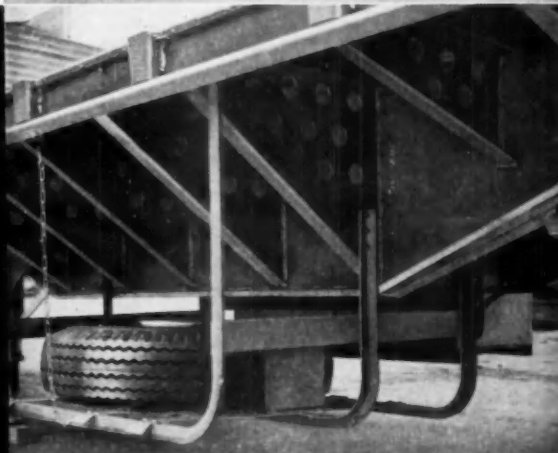
hit the road for **P·I·E**

tandem that slides over a 10-foot range to insure proper axle loading.

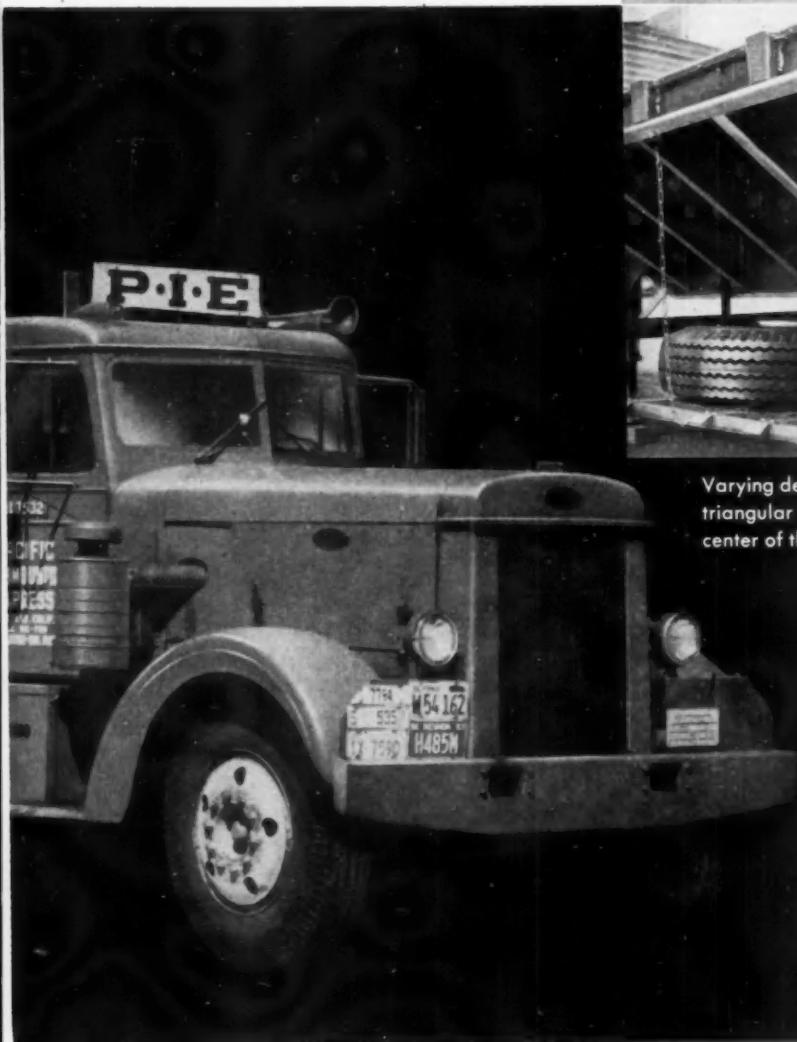
No matter what your hauling requirements, our engineers will gladly work with you to develop a design which will help lower your costs...increase your profits! For immediate service, call the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Bldg., Chicago 11, Ill.; Executive Office, Kaiser Bldg., Oakland 12, Calif.

Kaiser Aluminum

THE BRIGHT STAR OF METALS



Varying depth of aluminum main girders and triangular outriggers provide strength in the center of the unit.



AT YOUR SERVICE

Continued from Page 20

the thermostatic coil spring holds the valve in a closed position when the engine is cold, (3) that when the engine is accelerated and released, the valve counterweight can be seen to respond by rotating quickly and return to its normal position without interference.

Stronger Bulb Filament

ACCORDING TO A bulletin released by the Truck Trailer Manufacturers Assn., bulb manufacturers have improved the strength of the filaments of the bulbs commonly used in clearance lamps on 12-volt trucks. One of the reasons for the improvement was the need brought about by shock imparted by such factors as slamming of the trunk doors, glove compartment doors, and mounting the license plate bracket in the bumper.

While both the four and two candle power lamps have been improved in this respect, the four candle power lamp should perform better

than the two, both from standpoint of lighting results and filament strength. In general, the lamp manufacturers never have recommended the two candle power bulb for this service because of its relative fragility.

There is still a stronger construction available which is interchangeable with the trade No. 67. It is the trade No. 1247. This is a lamp which was originally developed for 12-volt military vehicles, and has two six-volt filaments connected in a series inside the bulb. When excessive vibration or shock is imparted, the use of the bulb of higher cost might well be justified.

Piston Damage Cause

SERVICE PERSONNEL should make it a point to examine the lower section of the top ring groove on any piston where a burned out connecting-bearing is to be replaced. If the bearing failed and the vehicle ran any length of time after the failure, it is more than likely that the piston will be damaged. This is particularly true on engines with high mileage.

When the lower half of the connecting-rod bearing is reduced in size, it allows the piston to move further up in the cylinder bore to a point where the top compression ring will strike the cylinder ridge at the top of the cylinder or sleeve. As a cylinder wears, the upper outer

(TURN TO PAGE 28, PLEASE)

NEW!

BOYERTOWN "WEIGHT-SAVER" BODIES

Magnesium and Fiberglass Reinforced Plastic

Here is the latest addition to the Boyertown line of standard "better built" truck bodies for the buyer who prefers an extremely lightweight unit. The deluxe "Weight-Saver" is ideal for businesses where lower operating costs, longer truck wear and easier handling are essential.

The smartly styled "Weight-Saver" is available now in two basic body sizes that will put more pay in your payloads with less dead-weight to haul. Contact us now for particulars about this most advanced truck body in the field.



CALL BOYERTOWN 7-2146 OR WRITE:

BOYERTOWN
AUTO BODY WORKS, Inc.
BOYERTOWN, PENNA.

ECHLIN EXTRAS IN CONTACT ASSEMBLIES *for all 3 systems*

NO-SLIP,
HEAVY DUTY
BUSHING

STAINLESS STEEL
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BERYLLIUM COPPER
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HEAVY DUTY
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Ignition

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ECHLIN IGNITION OF CANADA LTD. • 56 CONNIE ST. • TORONTO 15, CANADA



About 3 million cubic yards of dirt will be moved in construction of Table Rock Dam southwest of Springfield, Missouri. Power pool will cover 43,100 acres. Project is joint venture of Morrison-Knudsen and Utah Construction. Estimated completion date: 1958.

Report from Table Rock Dam.

*Morrison-Knudsen Co., Inc., and
Utah Construction use one
grease for all purposes*

AMOCO* Lithium Multi-Purpose Grease helps contractors meet manufacturer's recommendations for lubrication yet reduces grease inventories.

On the Table Rock Dam project the problem was how to lubricate more than 16 different *types* of equipment and still follow equipment manufacturer's recommendations without carrying a big inventory of greases. The answer to the problem was found in Amoco Lithium Multi-Purpose Grease. Here's the case history:

Morrison-Knudsen and Utah Construction lubrication and maintenance men, working with Standard Oil automotive lubrication specialists, made a complete lubrication survey. They studied each piece of equipment, the points to be lubricated and the manufacturer's lubrication recommendations. Amoco Lithium Multi-Purpose Grease proved to be the ideal lubricant for the job in every instance where it was recommended and used.

Bucket on the way! Harold Maxwell, Superintendent of Morrison-Knudsen Company, and Bob Buel watch eight-yard bucket of concrete pass overhead on way to forms. Standard management realizes importance of lubrication on construction projects, backs up lube sales with top-rated technical service.



Amoco
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Dispen
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Your
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Amoco Lithium Multi-Purpose Grease was adopted for all equipment. Morrison-Knudsen and Utah Construction have realized substantial savings. A smaller grease inventory reduced investment in supplies and cut record keeping. Dispensing and handling equipment now used is much less than what was formerly required. Application time is reduced to a minimum. Misapplication errors and resultant bearing failures are virtually eliminated.

Your lubrication problems can be licked in just the same way Morrison-Knudsen and Utah Construction have done it at Table Rock Dam. No matter where your job may be, in any of the 15 Midwest and Rocky Mountain states, there is a Standard Oil automotive lubrication specialist nearby. Call him. Or write Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.



Standard's Bob Buel (left) checks lubrication data with Jerald Maxwell, lube foreman with Morrison-Knudsen. Bob is qualified to assist customers with lubrication problems. He has been doing this work for more than four years. He's a graduate of Missouri School of Mines with a B.S. degree and has completed the Standard Oil Sales Engineering School. Customers find Bob's experience on the job and special training pay off for them.

**Quick facts about
AMOCO* Lithium Multi-Purpose Grease**

- Suitable for chassis, wheel bearing, water pump, universal joint, gear case, track roller and other grease lubrication.
- Pumpable at all temperatures. Easy to apply.
- Lubricates effectively in all weather. Soft grade available for extremely low temperature service.
- No bearing wash out even in severe service.
- Does not oxidize or cake in bearings.
- Mechanically stable. Will not thin in use.
- Stable in storage. Maintains uniform consistency.

*Trade mark Amoco registered U. S. Patent Office by The American Oil Company and used by Standard Oil Company under license.



STANDARD OIL COMPANY (Indiana)



Standard's Bob Buel checks conveyor belt used to move 450 tons of crushed rock per hour more than a mile. Bearings on conveyor are lubricated with AMOCO Lithium Multi-Purpose Grease.

Warm up cold motors **FAST!**



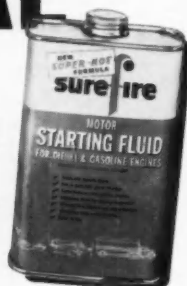
New Super-Hot

SUREFIRE

MOTOR STARTING FLUID

*Starts Any Gas or Diesel Engine, with TLC**

*Tender Loving Care



Economical Pint Can

That's right! The new, patented, low-ether formula SUREFIRE is safe...protects your engine against expensive upper cylinder damage and reduces engine wear by eliminating slow, hard starts all year 'round. The cheapest engine starting insurance you can buy. Tested and approved by major oil companies. Approved by NYC Fire Dept. Meets all ICC requirements. SureFire Starter Sprayer is available for easy application of bulk fluid.

- ✓ Prolongs battery and starter life
- ✓ Prevents crank case oil dilution
- ✓ Eliminates expensive standby time
- ✓ Reduces maintenance cost
- ✓ Operates to 65° below zero

Double-your-money-back guarantee. Sold at all leading automotive construction equipment and mill supply dealers. Try it today.



SureFire also comes in Handy 11-oz. Pushbutton Can

WILCO COMPANY

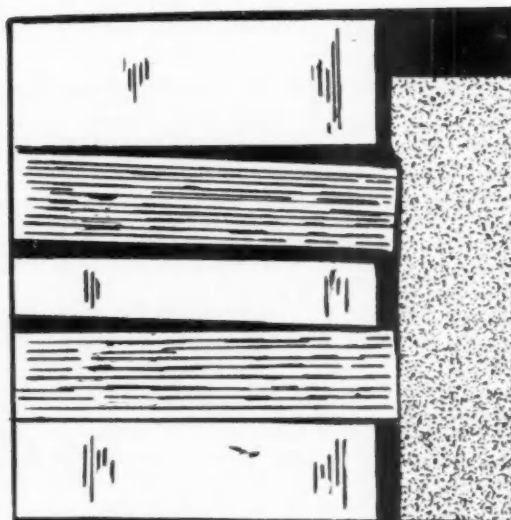
INDUSTRIAL & COMMERCIAL DIVISION
4425 Bandini Blvd., Los Angeles 23, California

surefire is especially effective for starting 2-cycle engines

CCJ AT YOUR SERVICE

Continued from Page 24

corner of the top ring wears to fit the rounded shoulder formed at the top of the ring travel. And should the piston travel higher than its normal travel, it will force the top compression ring to strike against the protruding cylinder ridge,



causing a clicking noise and in some cases bends or breaks the second land, thus locking second ring in the groove.

Before attempting to remove the piston and rod assembly the cylinder ridge should be removed with a ridge reamer. If the ridge isn't removed first, there is the possibility of bending or breaking the second land while pushing the piston up out of the cylinder, because if there is just enough of an overhanging ridge to be felt with a finger nail, the ridge will be struck by the top of the top ring as the piston is pushed upward to remove from the cylinder. When the ring is stopped by the ridge, the second land is brought sharply in contact with the stationary ring. This action usually bends or breaks the second land.

14-in. Tire Safety

WHEN INFLATING 14-in. tubeless tire, be sure to use a lubricant. Reports of injury have been noted when no lubricant is used. Due to the width of the outside wheel flange, the tire refuses to slide over the wide flange and spontaneously bursts over the top of the outside rim.

MILES
PER
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Motor
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MILES PER HOUR	ENGINE REVOLUTIONS PER HOUR		
	IN CONVENTIONAL AXLE HIGH	IN EATON AXLE HIGH-HIGH	SAVED
10	37480	33995	3485
20	74960	67990	6970
30	112440	101985	10455
40	149920	135980	13940
50	187400	169975	17425

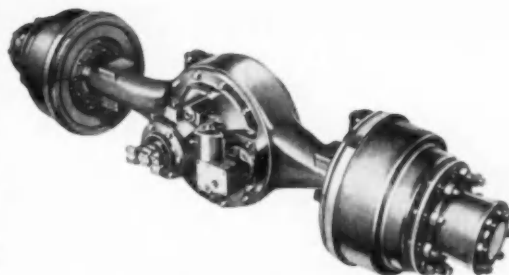
Based on most popular axle ratios
and tire size.

EATON 2-Speed Axles Cut Down "Revolutions per Mile"

Save Operating and Maintenance Costs—Make Trucks Last Longer!

The chart above shows the big reduction in engine revolutions made by Eaton 2-Speed Axles in high-high gear ratio. Fewer Revolutions per Mile mean reduced piston travel, less wear on every rotating engine part and power transmitting unit.

Not only when highballing on the open highway—but in every hauling situation—pulling out of the hole under full load, climbing steep grades, maneuvering in city traffic—Eaton 2-Speeds save wear and tear on engines by permitting them to operate in their most economical speed range. This results in important savings in operating and maintenance costs, thousands of extra miles between engine overhauls, fewer interruptions of operation, and more miles in the life of the truck.



More than Two Million
Eaton Axles in Trucks Today.
For complete information,
see your truck dealer.

EATON

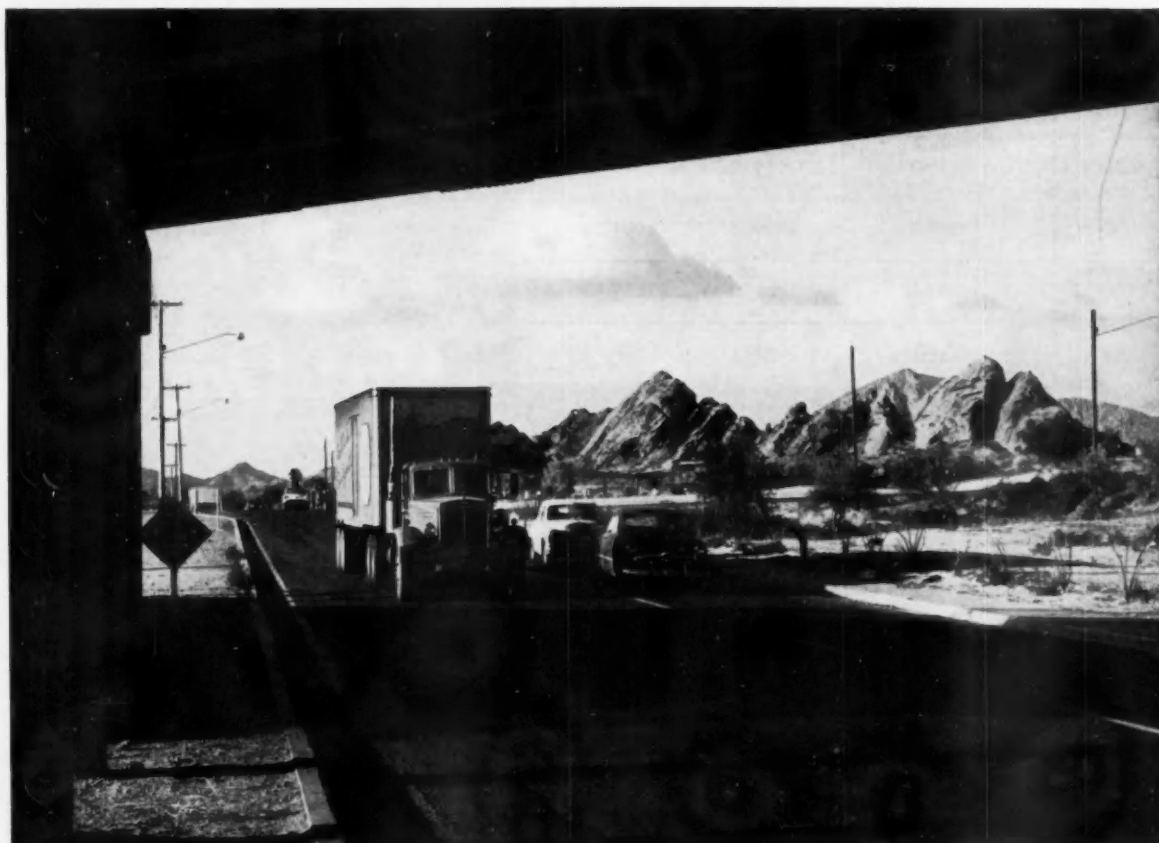
AXLE DIVISION
MANUFACTURING COMPANY
CLEVELAND, OHIO



PRODUCTS: Engine Valves* Tappets* Hydraulic Valve Lifters* Valve Seat Inserts* Jet Engine Parts* Hydraulic Pumps
Motor Truck Axles* Permanent Mold Gray Iron Castings* Forgings* Heater-Defroster Units* Automotive Air Conditioners
Fastening Devices* Cold Drawn Steel* Stampings* Gears* Leaf and Coil Springs* Dynamatic Drives, Brakes, Dynamometers

ENGINEER'S FIELD REPORT

PRODUCT RPM DELO OILS
FIRM H & R TRANSFER COMPANY
Phoenix, Arizona



240,000 miles without an overhaul for transport truck using RPM DELO Oil

LUBRICATED WITH RPM DELO Special Oil since new, a 200 h.p. Mack truck operated by H & R Transfer Company has completed 240,000 miles of highway hauling service without overhaul—and is still on the job. Engine has required only one valve job, and at that time, was reported very clean with no piston, ring or bearing changes necessary.

Another truck on this same haul went 200,000 miles before engine was pulled down. Owner H. J. Hart says, "Complete overhauls cost us \$1,500. Anything that stretches time between overhaul periods really saves us money—and that's RPM DELO Special."

Pulling 35-foot stainless steel vans, three of these trucks each travel 80,000 miles a year. H & R Transfer also uses RPM DELO Oil in 51 other trucks and five cranes.



TRADEMARK "RPM DELO" AND DESIGN REG. U. S. PAT. OFF.

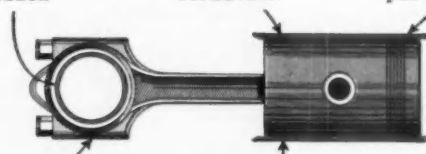
STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

Why RPM DELO Oils prolong engine life

Special compounds stop corrosion

Anti-oxidant resists lacquer formation

Detergent keeps all parts clean



Metal-adhesion qualities keep oil on parts in running or idle engine—inhibitor resists foaming.

For More Information about this or any other petroleum product, or the name of your nearest distributor, write or call any of the companies below.

DAREDEVIL CRASHES INTO



Courtesy Trans-World Daredevils

Your Drivers Do It Every Day



With a Bostrom "Level-Ride" 80 Seat road shocks and vibration are absorbed between the seat and the floor of the cab. You float smoothly over bumps and jolts.

Stunt drivers crash cars into a solid wall of ice to thrill the public. Punishing as this smashing impact appears, the shock your truck drivers experience every day on conventional seats is far greater.

No human body was ever designed to take the brutal torture of day-in, day-out pounding . . . the spine-shattering, kidney-jolting impact that comes from driving over rough highways.

No wonder the working span of the average driver is so short. No wonder such tired, surly drivers are a detriment to your business . . . no pleasure to their families in the evenings.

The logical, simple answer is to install a Bostrom "Level-Ride" 80 Seat in all your trucks. With this suspension seat shocks and vibration are absorbed between the floor of the truck and the bottom of the seat—not transmitted to the driver. He floats along on an almost vibrationless ride . . . no back slap or back rub, either.

Installed by many of the leading truck fleets . . . factory installed as optional equipment by all truck manufacturers. Available for replacement on your trucks from your truck parts jobber. See your Bostrom Distributor.

Bostrom Manufacturing Company,
133 West Oregon St., Milwaukee 4, Wis.



FREE MOTION PICTURE IN SOUND AND COLOR "Gentlemen, Be Seated," an informative motion picture on truck highway operation, is available without charge for showing to groups. Write for booking date.

For
Best Performance in

HYSTER[®]
LIFT TRUCK ENGINES



HYSTER...one of the leading manufacturers
using Perfect Circle 2-in-1 chrome rings
for service requirements

PERFECT CIRCLE

2-in-1 CHROME PISTON RINGS...*the standard of comparison*



UP FRONT WITH

CCJ

SEPTEMBER 1957 FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE, if your operation is similar to a Class I carrier of general freight, it costs you 39.18 cents per mile to put a vehicle on the road—33.29¢ in direct expense and 5.89¢ for general overhead (not including terminal costs). These are the cross-country averages developed by the Interstate Commerce Commission from Class I carrier reports based on 1956 cost levels. Maintenance runs to 9.77¢ per vehicle mile divided as follows—repairs and servicing 6.52¢, tires and tubes 2.39¢, supervision and shop overhead 0.86¢. Biggest chunk is for drivers' wages, workmen's compensation and social security. This comes to 10.01¢ per vehicle mile (probably higher for predominantly short haul operations). Other items average out at 4.05¢ for fuel and oil, 3.22¢ for depreciation, 2.02¢ for fuel and oil taxes, 1.87¢ for license and registration fees, 1.19¢ for insurance and safety, and 1.16¢ for driver supervision and other direct cost overhead.

ICC INSPECTION of interstate trucks (April, page 33) has found an advocate in Congress. Representative VanZandt, in the Congressional Record, claims that recent truck accidents show "inadequate maintenance was the chief cause of disastrous wrecks." He is pushing HR7048, authorizing the ICC to hire 100 "inspectors of safety appliances."

ICC SAFETY check results announced middle of last month lend some support to his exaggerated concern. Reporting on the second nationwide Safety Reg compliance check made this year, the ICC says it put "Out of Service" stickers on 18.6 per cent of the 12,237 vehicles checked—as compared to 10.3 per cent of those checked in May this year (July, page 33). Notes the ICC's report, mechanical accidents account for six per cent of all accidents reported to the ICC by interstate motor carriers. Says ICC Safety Chief Ernie Cox (in an exclusive interview beginning on page 70, this issue), "Although percentagewise (mechanical) defects in vehicles have not been shown to account for a major share of accidents, the share they do cause is sizable. . . ."

TWO BIG BUS conventions highlight the calendar the second half of this month. First is National Assn. of Motorbus Operators meeting at the Drake Hotel, Chicago, Sept. 18-20. Next is American Transit Assn., Sept. 22-25, at the Sheraton-Mount Royal Hotel, Montreal, Canada. Heavy emphasis at NAMBO will be on laws and regulations. IC Commissioner Everett Hutchinson, Congressman (and Minority Floor Leader) Charlie Halleck and Transportation Undersecretary of Commerce Louis Rothschild are scheduled speakers. . . . American Transit's Mechanical Division has programmed discussion of "reduced costs built into new buses," free piston engines, tubeless tires and power steering. Also scheduled is a trip through Montreal Transit's modernized shop.

DETROIT DISPATCH

NEW CARS WILL all be announced sometime in October with few exceptions. Ford's new Edsel made its bow late last month, and the Ford itself will be shown about mid-November. Three other late ones are Oldsmobile, Pontiac and Cadillac. All are due early in November.

TRUCK BRAKE NOW being tested up and down Pennsylvania's mountains uses fins for greater heat dissipation. Trials show almost complete elimination of fade, says the manufacturer.

DREAM DELIVERY truck, "L'Universelle," has been shelved by GMC. Brought out as a show model in 1955, the 1/2-ton panel delivery would have had to carry a \$4000 price tag.

ORIGINAL EQUIPMENT TIRES WERE expected to go up 5 per cent in price first of this month. The boost follows last month's \$3 to \$5 increase in replacement tires (Aug., page 34).

TUBELESS TIRES WILL be on 80 per cent of its production within two years, predicts Fruehauf Trailer Co. Presently 25 per cent of production is tubeless equipped as compared with 12 per cent last year.

BUTYL RUBBER TRUCK TIRE WAS accepted last month by Army Ordnance after extensive military testing. The new synthetics do not deteriorate in storage and are at least equivalent or superior in performance to military tires presently being made, says Dept. of Defense. Developed by Pennsylvania Tire Co. and Esso Research & Engineering Co., the butyl also resists chipping and ozone cracking.

BRAKE BALANCING BETWEEN tractor and trailer brakes is being investigated by truck builders. They want to reach an industry-wide standard, aren't sure whether to settle on full load, empty or partial load. Fleet men seem to favor a system which permits balanced braking at maximum legal axle loadings.

PARKING BRAKES ARE also being looked at. Automobile Manufacturers Assn. is investigating to see if need for an improved model is a universal problem or just confined to certain areas.

TWO-WAY RADIO HAS come a long way in a short time. Society of Automotive Engineers, after two years of study, is slated to release a report on

WASHINGTON WATCH

TRUCK DRIVER SHORTAGE IS coming, said Denver-Chicago Vice President N. J. Catsinas at last month's National Forum on Trucking Industrial Relations. He points out that many present over-the-road drivers are due for retirement and pensions in the next few years. He challenged the industry to train qualified drivers to replace those retiring as well as to man the ever-increasing number of trucks in the nation's fleets. (For further report from the Forum, see page 100, this issue.)

TRANSPORTATION TAX APPLIES to full amount paid under a guaranteed minimum tonnage agreement. Says the Internal Revenue Service in Ruling No. 57-339, tax is payable on actual tonnage carried plus "deadfreight" payments made to reach minimum.

TRANQUILIZER PILLS ARE no better than benzadrine "goof balls" for truck drivers. National Institute of Mental Health says those who take the pills have lower-than-usual physical coordination. For drivers, this could mean a fatal delay in maneuvering around a hazard or failure to stop in time to avoid an accident. Institute's advice is to take them only on doctor's orders.

USED TRAILER price data is being gathered by Truck-Trailer Manufacturers Assn. TTMA wants to publish a used trailer "bluebook." It says such information can be of considerable help to both fleetmen and the industry.

TRANSIT'S PUBLIC relations program to run 13 full-page promotional ads in a national news magazine (May, page 33) has been canceled. Transit prop-

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standardization of installation mountings in trucks sometime this fall.

DETROIT DIESEL NOW offers four engines to other truck makers than GM—its parent company (this issue, page 88). Both Dodge and Ford are reported considering the engines for heavy duty models.

NEW TRUCK MODELS WILL have an emphasis on more power. Two of the Big Three truck makers will unveil their 1958 models next month, with the third coming out in mid-November. One of them will have four new engines in its light-heavy line. Dodge arrives Oct. 27.

BROCKWAY PLANS increased production of heavy duty chassis. Also in the works are new off-highway models and short bumper-to-back-of-cab tractors.

NEW MULTI-PURPOSE GEAR lubricants were described at Society of Automotive Engineers West Coast Meeting last month. Designated as "Multipurpose-Type Gear Lubricant—API Service GL4," they were developed to overcome troubles created by increased axle gear loading.

erties subscribed half of the estimated \$65,000 cost, but contributions from manufacturers reached only \$7,500. Says American Transit Assn., "The decision (was) an extremely difficult one. . . ."

OHIO AXLE MILE TAX AND the resulting cancellation of reciprocity with Michigan and Indiana are all legal, says an Ohio court. Case was brought by Geo. F. Alger Co. against the Ohio Board of Tax Appeals. Further, says the court, Ohio's reciprocity board is not required to enter into reciprocity agreements. The board has the power to decide whether it wants to or not.

EDWARD MARGOLIN HAS been appointed Assistant to Undersecretary of Commerce for Transportation L. S. Rothschild.

TRUCK TONNAGE

FOR THE FIRST six months of this year, tonnage of inter-city general freight hauled by truck is about the same as for the same period last year. However, reports American Trucking Assns. Research Dept., June tonnage was down 3.9 per cent from that hauled in June, 1956, and 6.6 per cent less than that carried in May, 1957. Only gains in June, 1957, over June, 1956, were in the Southern region—up 3.1 per cent, and Southwestern region—up 0.2 per cent. Biggest losses were in the Central region—down 7.4 per cent, Middle Atlantic—down 4.8 per cent, and Pacific, down 4.6.

Month	% Change from Previous Month	% Change from a Year Ago
June, 1957	- 6.6	- 3.9
May, 1957	+ 2.7	0.0
April, 1957	.....	+ 3.1
1st Quarter '57	.....	+ 0.7
March, 1957	+ 7.5	- 1.0
February, 1957	- 7.0	- 2.4
January, 1957	+14.4	+ 3.7
4th Quarter '56	.....	- 0.2
December, 1956	-12.2	- 6.6
November, 1956	-10.2	- 1.4
October, 1956	+15.7	+ 7.0
3rd Quarter '56	.....	+ 0.4
September, 1956	- 6.5	- 8.0
August, 1956	+12.7	+ 1.3
July, 1956	.....	+11.2
2nd Quarter '56	.....	+ 5.6

TRUCK AND BUS PRODUCTION

Make	For Weeks Ending			Year to Date	
	Aug. 17	Aug. 10	Aug. 3	1957	1956
Chevrolet	7,355	6,937	7,143	232,860	230,923
G. M. C.	1,102	1,122	1,231	43,574	61,630
Diamond T.	129	126	128	3,387	3,266
Divco	24	24	24	1,987	2,613
Dodge and Fargo	1,516	1,467	1,731	52,255	58,476
Ford	6,531	5,111	6,724	228,744	201,688
F. W. D.	26	21	0	726	1,132
International	2,345	2,373	2,956	77,510	88,686
Mack	342	344	374	11,061	11,825
Reo	132	125	108	2,677	2,490
Studebaker	127	189	243	7,166	10,590
White	277	286	49	9,611	11,572
Willys	0	0	1,192	39,082	37,001
Other Trucks	70	70	60	2,757	4,366
Total—Trucks	19,974	18,195	21,905	714,245	736,199
Buses	50	65	65	2,720	2,913
Total—Trucks and Buses	20,024	18,260	22,050	716,965	739,072

Source: Automobile Manufacturers Assn.

IN THIS ISSUE

- ... there's an emphasis on **BUSES**, including
 - Three Routes to **TRANSIT PROFITS**.....page 76
 - Heated **OUTSIDE STORAGE** at United Transit...page 78
 - Trailways Shows Profit with **LUXURY BUSES**.....page 80
- ... an extensive **FLEET VISIT** begins with
 - Dowell's **COORDINATED** nationwide fleetpage 66
 - How it gets **MECHANICS** where they're needed page 69
- ... **ICC SAFETY REGS** are explained
 - in an exclusive interview with **W. Y. BLANNING** and **ERNEST G. COX**, Bureau of Motor Carrierspage 70

The Road Ahead



HALF TOLL AND HALF FREE WAS the score on the Interstate Highway System in mid-August. Bureau of Public Roads has OK'd addition of 2102 miles of **toll** highway in the system—1837 miles now in operation plus some 265 miles now being built. On the **free** side, some 60 miles have been finished with about 1927 miles either being built or ready to be contracted for. Total score: About 10 per cent of the 41,000-mile system now has a definite fixed route.

BIG QUESTION BEING asked by truck operators is, "Do we still have to pay toll for use of toll highways incorporated into the Interstate System in addition to the federal weight tax and other highway-use levies?" Answer right now is, "Yes." Come January, Congress will consider what to do. It can buy the mileage and set it free—or it can leave things as they are. Best bet for fleetmen: While Congress is adjourned, get ahold of your Senators and your Representatives. Let them know in positive terms what you'd like done and why.

AASHO ROAD TEST COMMITTEE IS asking for \$3½ million more from states cooperating in the project. Shortage of funds earlier postponed awarding of the paving contract for the test highway (July, page 36). Total estimated cost for getting facts to answer the big question—Who pays how much for what kind of highway?—now stands at \$22 million.

SIZE AND WEIGHT LIMITS MAY be set by Congress for federal-aid roads on incomplete facts. Report is due Congress in 1959 on what are economic sizes and weights, but much of the answer was to be developed from results of the AASHO Road Test. However, because test traffic will only be able to operate for a short while next year before winter halts testing, the data collected will be far from conclusive.

BRAKE TESTS WILL be included in the coming winter's testing by the National Safety Council's Winter Driving Hazards Committee. Axle-by-axle versus vehicle-by-vehicle emergency braking systems will be compared on typical winter slippery surfaces. Vehicles to be tested include 5-axle tractor and semi-trailer combinations and truck and full trailer rigs. Results will be coordinated with the current Interstate Commerce Commission—Bureau of Public Roads brake test program (Aug., page 33). Also to be checked is driver technique on ice with and without front wheel brake. Committee wants to know what effect elimination of these brakes has on combination units.

PRODUCTION TOTALS FOR June and the first half of this year are shown below:

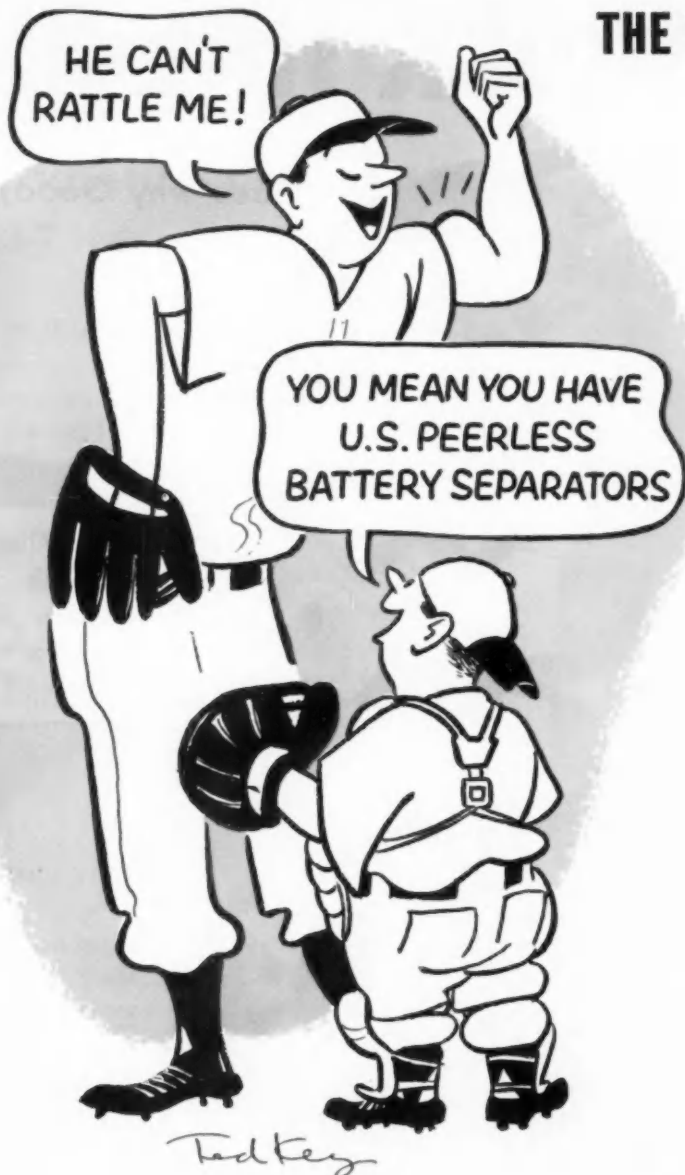
In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires					
									Replacement Shipments		Original Equip. Shipments		Inventory End of June	
	June	6 Months	June	6 Months	June	6 Months	June	6 Months	June	6 Months				
1957	71.3	422.8	76.9	484.6	5.1	31.9	332	1849	715.0	4083.8	369.8	2184.2	3461.0	
1956	78.5	455.0	73.5	488.0	7.0	37.1	471	2056	967.5	4367.7	371.6	2529.8	3503.5	

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THE BATTERY FOR TODAY



Here's why
Peerless-equipped
batteries are
immune to
vibration
damage

Automotive batteries undergo plenty of vibration and jarring, causing plates to injure ordinary battery separators. This results in shorts and battery failure. But U. S. Peerless® Rubber Battery Separators, because of their high abrasion resistance, stand up under vibration—even *outlast* the plates. They are true battery protectors.

U. S. Peerless cannot be harmed by battery acid, heat or plate pressures — will not get mushy or soft in service. Protect your battery investment — make sure your batteries have U. S. Peerless Separators. United States Rubber, Rockefeller Center, New York 20, N. Y.



Mechanical Goods Division

United States Rubber

NEWEST TRUCK TIRE BRE AN

See why Goodyear's new

New Hi-Miler Cross-Rib
built with
Triple-Tough
3-T Nylon Cord

GOODYEAR TIRES

Look for this nearby Goodyear dealer sign for better tire values — better tire care.

REAKS MILEAGE RECORDS!

new **Hi-Miler Cross-Rib**—with extra-thick tread and 3-T Nylon body—*delivers greatest original highway mileage!*

Hi-Miler Cross-Rib features add up to vastly longer tread life—*pull-through* traction, instead of *pound-through*—and no heat-up headaches. In fact, the millions of miles now being rolled up by this great new highway tire bring floods of acclaim like this:

- 40% MORE ORIGINAL MILEAGE THAN ANY OTHER TIRE!

(Mountain State common carrier)

- NEW CROSS-RIB TIRES STILL HAVE HALF THEIR NONSKID DEPTH—WHILE OTHER TIRES ARE WORN TO CARCASSES!

(East Coast tank line)

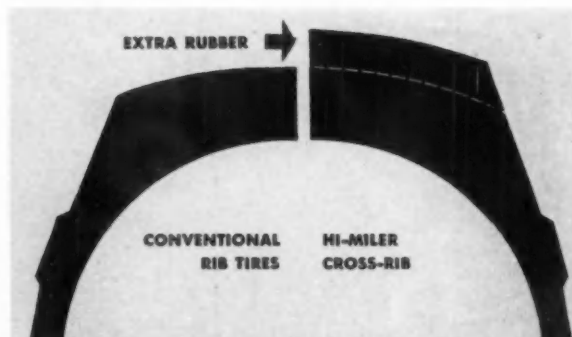
- 28% MORE ORIGINAL MILEAGE THAN ANY TIRES WE TESTED!

(West Coast van line)

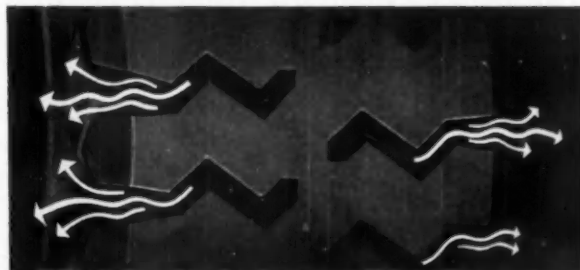
- 76% MORE ORIGINAL MILEAGE THAN ON FORMER HEAVY-TREAD TIRES!

(State of Washington heavy-hauler)

Wouldn't you like to join in a chorus like that? Then *try* the New Hi-Miler Cross-Rib on your own vehicles—test it against any other heavy-tread highway tire money can buy—and prepare to be **AMAZED!** See your Goodyear dealer—or contact Goodyear, Truck Tire Dept., Akron 16, Ohio.



Nonskid depth 60% greater than in any conventional highway truck tire. New, wider, flatter tread puts more rubber on the road—insures greater stability, and far longer service even on newest power-idler units!



Dissipates heat faster—The unique design of the Cross-Rib's tread and shoulders lets heat escape more quickly—and this new design—plus 3-T Nylon cord—keeps tire temperatures to a safe level.

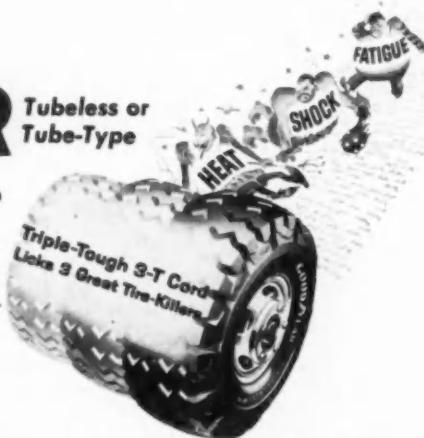
Buy and Specify

GOOD YEAR

Tubeless or
Tube-Type

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

Triple-Tough 3-T Nylon Cord runs cooler—licks Heat, Shock and flex Fatigue, the principal destroyers of truck tire life.



Hi-Miler—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

To a fleet maintenance chief
who has to "keep 'em rolling"!



Here's Hygrade's pump with the "never-say-die" diaphragm

Nobody has to tell *you* that it's the diaphragm that makes or breaks a fuel pump. You've seen too many perfectly good pumps fold up after only a few thousand miles because the diaphragm "went".

Here's HYGRADE's solution — the one-piece, non-corrosive *Monoflex* diaphragm that *lasts for the life of the pump*. And it's not just the rugged material in it that makes *Monoflex* the longest-lived diaphragm on the market—it's also the way it's fitted. The diaphragm is so tightly sandwiched between the smooth casting surfaces that not even the *smell* of gas can escape.

Its great diaphragm isn't the only reason for this HYGRADE fuel pump's popularity with fleet men. For instance, the rocker arm is heat-treated for extra strength and minimized wear. And its valve springs are phosphor bronze, oil-treated, remain perfectly elastic.

Write our engineering department for complete details. That's HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., 37-18 Northern Boulevard, Long Island City 1, New York

HYGRADE



Carburetor Kits • Fuel Pumps & Kits • Speedometer Cables & Casings

DATES and DOINGS

SEPTEMBER

- 16-17—Wisconsin Motor Carriers Assn., Annual Meeting, Lake Lawn Resort, Delavan, Wis.
- 16-19—National Truck Leasing System, Annual Meeting, Palmer House, Chicago, Ill.
- 17-18—Central Motor Freight Assn., Annual Convention, Conrad Hilton Hotel, Chicago, Ill.
- 18-20—National Assn. of Motorbus Operators, Annual Convention, Drake Hotel, Chicago, Ill.
- 19-20—Tennessee Motor Transport Assn., Annual Meeting, Andrew Johnson Hotel, Knoxville, Tenn.
- 19-21—Idaho Motor Transport Assn., Annual Convention, Sun Valley Lodge, Sun Valley, Idaho.
- 19-21—Pennsylvania Motor Truck Assn., Fall Meeting, Bedford Springs Hotel, Bedford, Pa.
- 20—Minnesota Motor Transport Assn., Annual Meeting, Hotel St. Paul, St. Paul, Minn.
- 20-21—Local Cartage National Conference, American Trucking Assns., Heavy and Specialized Carriers, Mid-Year Meeting, Radisson Hotel, Minneapolis, Minn.
- 20-22—Virginia Highway Users Assn., Annual Meeting, The Cavalier Hotel, Virginia Beach, Va.
- 22-26—American Transit Assn., Annual Meeting, Sheraton-Mt. Royal Hotel, Montreal, Quebec, Canada.
- 24-25—Midwest Shipper-Motor Carrier Conference, Radisson Hotel, Minneapolis, Minn.
- 26-27—Kansas Motor Carriers Assn., Annual Convention, Hotel Broadview, Wichita, Kan.
- 27—Iowa Motor Truck Assn., Annual Meeting, Savery Hotel, Des Moines, Iowa.
- 29-Oct. 3—North Carolina Motor Carriers Assn., Annual Convention, Hotel Carolina, Pinehurst, N. C.

OCTOBER

- 2-8—Regular Common Carrier Conference, American Trucking Assns., Board of Directors Meeting, Sheraton Hotel; Annual Membership Meeting, Conrad Hilton Hotel, Chicago, Ill.
- 6-9—Executive Committee, American Trucking Assns., Conrad Hilton Hotel, Chicago, Ill.
- 6-11—American Trucking Assns., Annual Convention, Conrad Hilton Hotel, Chicago, Ill.
- 10-11—Indiana Motor Bus Assn. and Ohio Motor Bus Assn., Annual Conventions, Sheraton Hotel, French Lick, Ind.
- 14-16—Truck Body and Equipment Assn., Annual Meeting, Atlanta-Biltmore Hotel, Atlanta, Ga.
- 17—New England Transit Club, Fall Meeting, Statler Hotel, Boston.
- 20-22—Florida Trucking Assn., Annual Convention, Eden Roc Hotel, Miami Beach, Fla.
- 21-25—National Safety Congress and Exposition, Conrad Hilton, Congress, Morrison and LaSalle Hotels (Commercial Vehicle and Transit sessions, LaSalle Hotel), Chicago, Ill.
- 24-26—Oregon Trucking Assn., Annual Convention, Gearhart Hotel, Gearhart, Ore.
- 25-26—West Virginia Motor Truck Assn., Annual Meeting, Daniel Boone Hotel, Charleston, W. Va.
- 28-30—American Road Builders Assn., Annual National Highway Conference for County Engineers and Officials, French Lick-Sheraton Hotel, French Lick, Ind.

TOUGHER...

"to stand
the
GAFF!"

plain,
cadmium
or chrome
plated ...



Remember too,
HANSEN also offers a
splendid line of ONE-HAND
TACKERS for general tacking
and fastening operations.



...the well earned reputation of **HANSEN** Heavy-Duty Hardware

To stand up under the severe strain and abuse given to Commercial Body Hardware in all kinds of weather and hard usage, nothing can surpass the rugged construction and long-life durability of HANSEN products ... for 35 years the leader in its field.

HANSEN Hardware retains its quality appearance and lasts longer because it

is properly designed and manufactured to rigid standards. When ordering or specifying, insist upon HANSEN ... the most dependable and foremost name in Commercial Body Hardware. Select from the most complete line, readily available for your requirements.

Write today for complete information!

A. L. HANSEN MFG. CO. 5047 RAVENSWOOD AVENUE, CHICAGO 40, ILLINOIS

"From every angle they fill the bill!"

Why **YELLOW
TRANSIT** *specified ASF
Safety 5th Wheels*



One of the recently purchased fleet of 210 turbodiesel-powered tractors—hauling a new 35-foot trailer. This up-to-the-minute Yellow Transit equipment is now operating on an 8,435-mile route, serving eight states between the Great Lakes and the Gulf of Mexico.

William R. Riley, Superintendent of Maintenance for Yellow Transit Freight Lines, Inc., writes why ASF Safety 5th Wheels were chosen for Yellow Transit's entire fleet of new tractors.



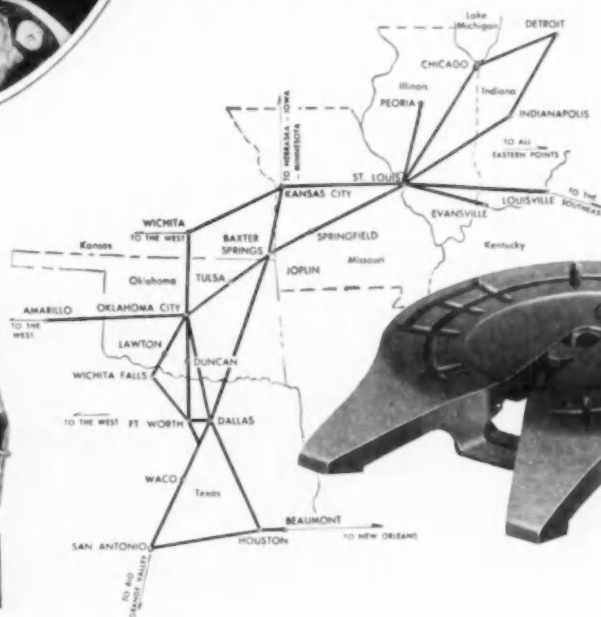
Anyone at Yellow Transit would agree that the *first* consideration in choosing a 5th wheel is *safety*. But, beyond that are vital questions of dollars and cents . . . ease of maintenance . . . payload as opposed to gross weight . . . dependable operation. According to William R. Riley, Superintendent of Maintenance:

"We recently purchased a fleet of 210 new tractors—and in planning this purchase, almost every department in the company was consulted.

"When it came to choosing a 5th wheel we wanted one that the driver would like; that was easy to maintain and on which we could expect good service; and that was low in operating cost and light in weight.

"We thought you would be interested in our reasons for specifying ASF Safety 5th Wheels for the entire fleet. The choice was based on careful consideration of all factors, and our experience to date indicates that from every angle they fill the bill."

You bet we are interested in the reasons, Mr. Riley! Those reasons show that regardless of whether a man's first concern is operating profit . . . or low-cost maintenance . . . or safe over-the-road performance . . . *there's just one first choice in a 5th wheel*. One trial will prove it! See your nearest ASF Distributor, or write: American Steel Foundries, Hammond Division, Hammond, Indiana.



Make an investment in safety . . . with

ASF
safety 5th wheels



Fleetman's LIBRARY

REVIEWING THE BEST IN CURRENT PUBLICATIONS ON MAINTENANCE, EQUIPMENT
AND SAFETY OF INTEREST TO TRUCK, BUS AND CONSTRUCTION FLEET OPERATORS

As a special service, complete address of each source is included so readers may save time—write directly for copies of the publications reviewed

Fire Prevention Standards

*from National Fire Protection Assn.
60 Batterymarch St., Boston 10, Mass.*

include new revisions of "Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers," "Flammable Liquids Code," and "Recommended Regulatory Standard for Tank Vehicles for Flammable Liquids."

The Code, NFPA No. 30, was prepared by a representative technical committee and deals with all phases of flammable liquids, storage and handling. It supplants the former "Suggested Ordinance on Flammable Liquids" and its new form is intended to be used not only as a basis of municipal ordinances but also as the basis of state or provincial regulations. Its price is 60¢.

The cleaning booklet, NFPA No. 327, is new in its field and represents authoritative information as to best methods of avoiding fires and explosions when welding or doing other work on small containers. Its price is 40¢.

The "Standard," NFPA No. 385, deals with the construction and operation of tank trucks for highway transportation of gasoline, fuel oil and other flammable liquids. Price is 40¢.

Overlay Bulletin

*from Technical Information Service
Eutectic Welding Alloys Corp.
40-40 172nd St., Flushing 58, New York, N. Y.*

is a free 20-page technical publication on overlays (TIS 2821). A special issue of Eutectic's semi-monthly Technical Information Digest, the publication treats wear and the need for overlays for abrasion, corrosion, friction, heat and impact. Overlay applications and hard surfacing welding procedures are illustrated with 58 photos.

Federal Tax Booklet

*from E. I. du Pont de Nemours & Co.
Public Relations Dept.
Wilmington 98, Del.*

is a beautifully-illustrated booklet in which du Pont has boiled the nation's—and the world's—tax picture down to its simplest terms while retaining the full impact of the "tax problem." Starting with taxes of the earliest times, it gives the tax structure to the average citizen, small businesses, large corporations and to the government. It dwells upon the problems taxes have caused both legislators and the public. It is free upon request.

Trailer Appearance Manual

*from Fruehauf Trailer Co., Service Division
Detroit 32, Mich.*

details a complete program of cleaning, brightening and protection procedure with descriptions of Fruehauf materials used to maintain and improve the appearance of vehicles. Covering the nature of deposits which gather on trailer surfaces, it also deals with materials and methods for removing the deposits on aluminum, stainless steel and painted surfaces as well as plastics, including Plexiglas. Also included is a section of coatings to prolong clean appearance of trailer after maintenance. Free, it is also available at all Fruehauf branches.

Air Filter Booklet

*from Purolator Products, Inc.
Rahway, N. J.*

called "Air Filter Facts," tells the purpose, uses and demands put on air filters on automobiles and trucks. It also has a section on the servicing of filters and standards filters should meet to be effective. It is free.

Transportation Corps History

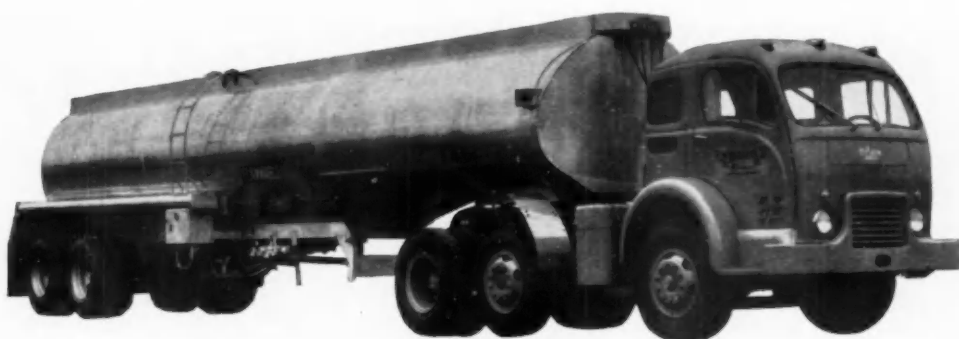
*from Superintendent of Documents
U. S. Government Printing Office
Washington 25, D. C.*

is a 3-volume account of the part played by the Army's Transportation Corps in World War II. For fleet executives participating in Reserve activities, they should provide a valuable addition to their military transportation library.

First volume, "The Transportation Corps: Responsibilities, Organization and Operations," sells for \$3.25. It covers the Corps' position at the start of the war, the part transportation facilities were expected to cover and how they met the challenge.

Second volume, "The Transportation Corps: Movements, Training and Supply," sells for \$4.25. It is a description of the Corps' activities in the States.

Third volume, "The Transportation Corps: Overseas Operations," sells for \$6.50. The most interesting of three, it describes the many and varied problems met and overcome in transportation in the various overseas operations. (FOR RECENT MANUFACTURER'S LITERATURE, SEE PAGE 150)



Every Tenth Gallon Is Extra Payload for Wheeling Pipe Line

Wheeling Pipe Line, Inc., Eldorado, Ark., operates 24 aluminum tank trailers in a five-state area, with each unit averaging 125,000 miles per year. Ask president Robert Newell why he prefers aluminum and you get a mighty convincing answer—10% payload increase over units built of heavier metals! No wonder that his company duplicated a 1956 purchase by buying ten more Butler aluminum tank trailers last January and plans still other additions to its fleet.



Alcoa Aluminum Makes the Big Difference

Your Guide to the Best in
Aluminum Value



THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS

Butler Manufacturing Co. made these payload gains possible by using lightweight Alcoa® Aluminum welding alloys to build the Wheeling Pipe Line trailers. Aluminum also provided corrosion resistance which eliminated costly painting and risk of cargo contamination. Tank cleaning became an easier job, and gas mileage rose significantly as deadweight dropped. Wheeling Pipe Line's benefits don't stop with aluminum trailers, though. Ten of their units roll on Alcoa Aluminum Forged Disc Wheels—trimming deadweight by another 400 pounds and boosting tire mileage because they run cool and true. *The Road to Payload Profits* gives you all the facts on greater earnings with aluminum. For your free copy, write Aluminum Company of America, 1876-J Alcoa Building, Pittsburgh 19, Pennsylvania.



Typical Delco-Remy one-piece ignition contact set for external adjustment distributors, and its distinctive, moisture-proof foil-wrapped package.



DELCO-REMY LEADS THE FIELD WITH NEW ONE-PIECE, PREADJUSTED IGNITION CONTACT SET FOR THE REVOLUTIONARY EXTERNAL ADJUSTMENT DISTRIBUTOR

Never before such convenience, accuracy, quality, and sales appeal in ignition contact sets. This new, completely assembled, factory-adjusted unit specially developed for Delco-Remy external adjustment distributors offers these important advantages:

- 1** One-piece construction for easier, quicker installation.
- 2** Fully adjusted, including spring tension and contact alignment.
- 3** Convenient primary terminal for easy attachment and detachment of leads.
- 4** Revolutionary new adjusting screw permits easy, accurate adjustment of cam angle *while the engine is running*.
- 5** New moisture-proof, heat-sealed foil package protects contacts from dirt and oxidation—is easy to stock, identify, and *sell*.

Each set is enclosed in the new Delco-Remy moisture-proof metal foil package. These colorful, distinctive packages stack neatly in your parts cabinet, are easily identified, and assure your customer factory-fresh, original equipment merchandise.

DELCO - REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS

WAUSAU

the complete line of....

HEAVY DUTY PISTON RINGS

for commercial and industrial applications



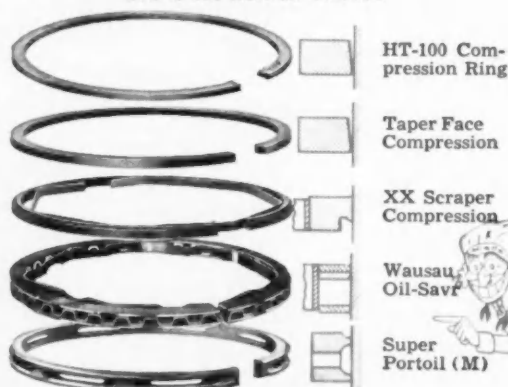
Chief of compression rings!

HT-100 From an exclusive alloy formula . . . the toughest, "performingest" compression ring of them all. Highly elastic, shock, heat and fatigue resistant.

Wherever heavy duty piston rings are needed, WAUSAU has a custom made set specifically designed for the engine, for almost every application. These sets were developed exclusively for heavy duty service . . . to hold compression and control oil under the most severe operating conditions. You'll find over 50 different ring designs in the WAUSAU line developed to cure the eccentricities of the various engine models. WAUSAU's size range covers the smallest air cooled engine to the big diesels; buses, trucks, heavy transport vehicles, stationary engines; with *quality* built into every set. WAUSAU rings have won an enviable reputation . . . your assurance of acceptance and satisfaction wherever heavy duty piston rings are needed. See your jobber or write . . .

Sets for every condition . . . every engine

Typical of many Wausau Heavy Duty Sets is this HCM combination.



HT-100 Compression Ring

Taper Face Compression

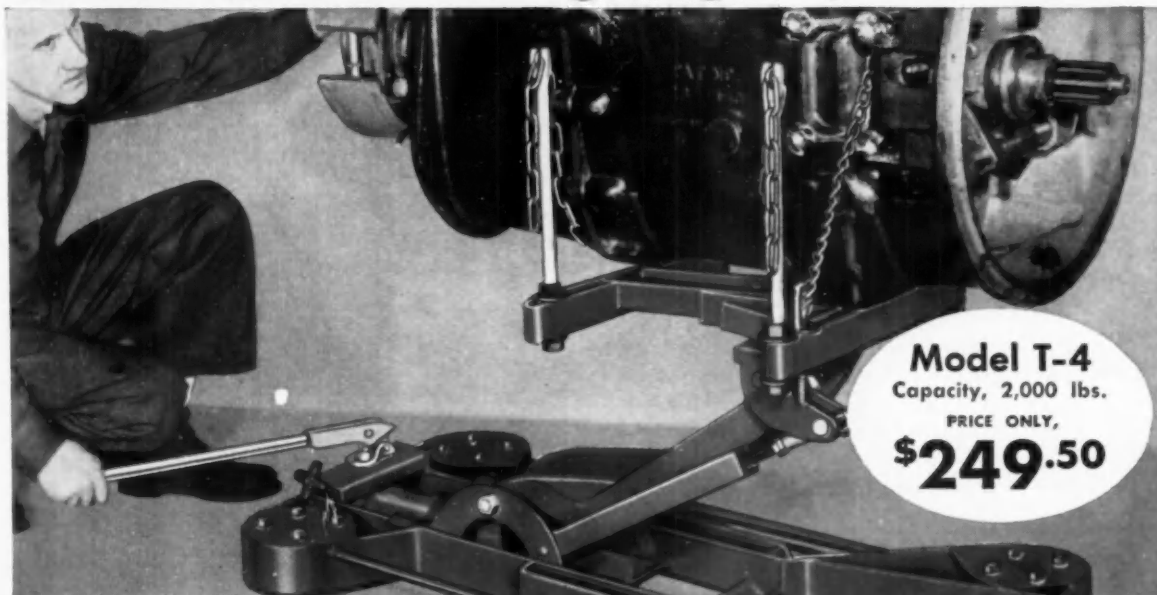
XX Scraper Compression

Wausau Oil-Savr

Super Portoil (M)

WAUSAU MOTOR PARTS COMPANY • Manufacturers • 2400 Eau Claire St., Schofield, Wis.

BIG NEWS FOR FLEETS



NEW BLACKHAWK **T-4 hydraulic jack for all shapes,** **all sizes, all makes of truck transmissions!**

Prices subject to change without notice.

Blackhawk offers you a hydraulic jack especially engineered for servicing truck transmissions easier, faster, safer than ever before! Rugged Model T-4 supports, positions, securely holds *all* shapes, *all* sizes, *all* makes of truck transmissions.

Best yet, now *one man* can easily remove, transfer and service transmissions, clutches, differentials.

A breeze to handle! Tilt it freely — to clear all obstructions. Rock it without adjusting manually. Great for disassembly or minor repairs . . . or easy transfer to bench.

Take a few well-spent minutes to see a demonstration of the new Blackhawk T-4 truck transmission jack at your nearest jobber. You'll be time and money ahead tomorrow!

Call your jobber today

Make your next jack buy a

BLACKHAWK

BLACKHAWK MFG. CO., DEPT. J-1197
MILWAUKEE, WISCONSIN

Revolutionary, shop-proven features



ALL-ANGLE PUMP — rotates 360°. Easy to operate from any position.



LO-JACK DESIGN — lowest possible overall unit height so necessary for long, extra-large transmission handling.



COMBINATION CONTROLLED AND FLOATING FRONT TO BACK TILT — permits unit to clear obstructions. Allows proper positioning during transmission removal or replacement.



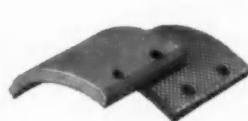
UNIVERSAL ADAPTER — four adjustable posts support transmission conforming chain slings. Adjustable "V" posts receive all-truck bell housing and differential flanges.

1957 New Truck Registrations

STATE AND MONTH	Brockway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Reo	Studebaker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama	June 1	508		39	378	133	108	22		1	27	3	4	16	1,239
6 Mos.		3,170	19	263	2,505	834	697	237	13	19	151	20	41	69	8,039
Arizona	June	297		42	236	105	81	2		5	6	12	16	26	806
6 Mos.		1,609	4	289	1,520	470	319	16	4	48	23	36	91	113	4,542
Arkansas	June	136		17	132	30	40	3		3	1	4	5	3	366
6 Mos.		2,386	14	304	2,227	665	594	43		57	26	17	27	12	6,356
California	June	2,905	21	514	2,845	476	383	42	13	43	83	46	120	406	7,870
6 Mos.	1	16,164	134	2,638	17,059	3,194	2,966	135	102	381	342	328	631	2,124	46,399
Colorado	June	296		54	306	78	80	12		7	2	22	52	11	923
6 Mos.		1,889	15	298	1,893	533	645	68	16	54	36	142	240	92	5,921
Connecticut	June	222		48	205	31	70	19		2	25	11	12	44	694
6 Mos.	9	1,031	38	259	1,036	241	519	139	22	32	113	56	121	163	3,777
Delaware	June	11		10	79	24	40					3	2	8	207
6 Mos.	6	450	22	93	308	129	192	40	4	10	50	12	19	14	1,349
District of Columbia	June	63		4	64	14	14	2		8				4	184
6 Mos.		534	3	44	335	73	142	16		3	9	7	36	44	1,254
Florida	June	614		112	751	107	161	43		6	16	33	34	40	1,969
6 Mos.	1	4,684	50	632	4,495	977	1,136	270	75	112	229	132	343	411	13,547
Georgia	June	632		62	755	114	149	30		3	6	23	9	24	1,826
6 Mos.		4,371	58	468	3,894	1,070	1,222	181	22	83	165	94	82	75	11,945
Idaho	June	137		48	153	44	62	2		2	5	20	11	11	491
6 Mos.		956	2	248	854	333	356	13	2	59	13	34	164	52	3,086
Illinois	June	814		21	119	896	155	361	46	3	12	31	11	24	2,550
6 Mos.		5,997	203	970	5,733	1,355	2,749	230	44	179	291	88	247	358	18,444
Indiana	June	642		12	130	734	121	293	29	14	34	61	8	16	2,141
6 Mos.	1	3,417	80	728	3,710	823	1,649	135	59	245	331	42	108	184	11,510
Iowa	June	365		11	45	406	64	78	1		3	6	8	24	1,121
6 Mos.		2,221	68	341	2,361	475	1,032	39	12	61	53	13	60	122	6,935
Kansas	June	447		5	42	424	72	118	4	2	12	10	5	18	1,172
6 Mos.		2,461	25	267	2,462	450	721	17	8	74	80	21	76	41	6,703
Kentucky	June	444		4	45	441	108	133	7		7	15	11	8	1,238
6 Mos.		2,566	18	338	2,197	707	680	59	16	55	60	53	104	44	6,895
Louisiana	June	615		3	61	553	93	109	12		8	9	8	7	1,467
6 Mos.		4,444	28	424	3,513	703	879	91	36	62	71	54	65	53	10,429
Maine	June	225		3	312	77	146	16		13	13	13	3	22	2,226
6 Mos.	5	709	5	163	896	219	465	56		39	31	75	147	55	2,665
Maryland	June	322		46	239	48	81	40	3	2	9	5	2	17	819
6 Mos.	18	1,782	13	399	1,629	360	548	155	34	46	118	22	68	82	5,274
Massachusetts	June	334		4	65	315	77	159	20	2	7	35	14	23	1,099
6 Mos.	12	1,584	31	419	1,878	456	898	112	15	34	180	95	236	231	6,181
Michigan	June	897		30	250	1,157	169	177	45	9	19	30	10	58	2,891
6 Mos.		5,361	106	1,272	5,673	1,173	1,024	176	89	181	232	76	329	325	15,660
Minnesota	June	337		3	50	475	54	168	9	2	9	2	7	25	1,147
6 Mos.		2,765	30	532	3,189	549	1,095	30	15	121	62	31	108	110	8,637
Mississippi	June	442		43	469	78	83	9		7	4	8	5	5	1,153
6 Mos.		2,546	6	251	2,448	561	750	50		48	14	23	41	19	6,556
Missouri	June	671		6	58	518	109	172	8		6	199	3	7	1,596
6 Mos.		4,501	27	480	3,466	1,008	1,177	79	18	90	169	33	48	105	11,211
Montana	June	175		32	210	46	85	16		7	2	7	2	23	1,053
6 Mos.		977	3	176	898	261	567	33		62	30	50	194	57	3,398
Nebraska	June	263		4	21	228	37	97	4		5	7	10	2	682
6 Mos.		1,514	43	157	1,395	330	619	31	3	34	65	32	50	44	4,317
Nevada	June	40		7	38	8	5	1		1		3	12	6	121
6 Mos.		615	2	55	421	104	86	6	1	29	1	19	57	33	1,429
New Hampshire	June	62		14	72	24	38	13	2	3	3	1	14	13	258
6 Mos.		501		122	490	77	284	73	3	3	190	37	12	78	1,927
New Jersey	June	902		15	133	571	167	71	6	5	47	7	26	63	2,224
6 Mos.	72	4,166	81	942	3,016	1,027	1,148	375	28	63	345	60	189	383	11,895
New Mexico	June	513		1	52	406	146	108	18	8	5	9	12	13	1,297
6 Mos.		1,903	3	165	1,035	431	348	33	20	35	30	29	65	22	4,119
New York	June	1,256		23	333	1,239	259	440	108	32	28	98	37	117	4,171
6 Mos.	193	6,530	116	2,135	5,571	1,718	2,995	667	186	175	620	296	746	1,042	22,952
North Carolina	June	460		47	457	80	131	48	1	8	24	9	8	14	1,281
6 Mos.		4,006	48	470	3,224	758	908	380	9	79	179	46	70	73	10,249
North Dakota	June	110		25	152	18	89			1	1	3	1	2	402
6 Mos.		676		136	849	159	497	2		24	2	7	17	15	2,394
Ohio	June	880		29	192	1,101	143	354	58	21	15	75	12	45	2,984
6 Mos.	1	5,527	82	1,410	6,448	1,202	2,160	408	108	152	558	111	372	379	18,916
Oklahoma	June	602		47	574	97	139	6	2	9	8	7	13	7	1,511
6 Mos.		2,956		252	2,658	562	751	61	24	46	94	23	45	59	7,536
Oregon	June	322		3	41	323	69	12	4	9	47	5	23	76	1,053
6 Mos.		2,157	22	362	1,862	613	778	103	31	125	192	72	308	488	7,111
Pennsylvania	June	945		18	295	1,102	285	487	137	7	49	102	31	97	3,622
6 Mos.	63	5,218	79	1,504	5,435	1,320	2,356	700	60	227	474	205	606	209	18,456
Rhode Island	June	52		2	24	115	16	27	13	2		6	4	3	273
6 Mos.	1	271	9	80	359	66	157	53	10	2	56	21	15	49	1,159
South Carolina	June	659		25	242	35	43	11		3	5		5	8	1,037
6 Mos.		1,923		196	1,631	279	321	69	1	21	37	20	33	36	4,568
South Dakota	June	171		1	83	196	47	86	10	1	4	2	6	20	603
6 Mos.		895	7	141	711	213	595	12	4	17	3	26	76	25	2,526
Tennessee	June	502		1	46	402	80	132	11		6	27	5	11	1,231
6 Mos.		3,004	24	417	2,584	896	810	154	6	36	104	23	61	47	7,988
Texas	June	2,335		9	188	2,181	243	471	50	1	26	100	47	35	5,731
6 Mos.		14,613	100	1,245	11,930	2,018	3,152	472	32	187	695	159	219	215	35,037
Utah	June	160		2	28	187	36	62	3		3		12	10	516
6 Mos.		865	16	156	807	210	227	25		4	26	16	56	82	2,052
Vermont	June	123		1	14	76	36	40	3		7	2	15	14	345
6 Mos.	4	447	5	91	396	169	225	21	2	26	3	73	125	38	1,627
Virginia	June	486		71	502	100	150	24	8	14	15	16	15	16	1,427
6 Mos.		3,083	3	544	2,829	631	945	258	23	114	177	77	191	115	8,990
Washington	June	499		3	75	446	134	126	26	1	19	16	63	61	1,487
6 Mos.		2,202	48	389	1,875	629	687	78	9	78	53	42	181	325	6,596
West Virginia	June	275		1	55	318	60	87	4	12	9	24	36	13	917
6 Mos.		1,366	6	322	1,216	410	432	39	16	76	62	118	216	84	4,332
Wisconsin	June	376		1	53	441	72	144	10	1	11	21	17	21	1,190
6 Mos.		2,356	13	371	2,322	499	1,153	102	21	89	94	30	132	196	7,378
Wyoming	June	103		1	22	113	27	43	3	2	3	7	25	2	354
6 Mos.		652	4	95	591	216	275	25	3	29	26	29	118	14	2,077
Total	June, 1957	44	24,735	267	3,849	24,529	4,651	7,015	175	482	1,078	540	1,201	1,675	71,335
Total	June, 1956	100	26,547	301	5,760	23,418	6,943	8,964	1,064	311	711	1,324	1,174	1	



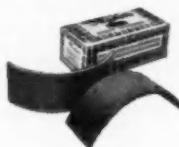
**If it travels on wheels, Raybestos
can help you cut the operating cost-per-mile**



Woven Molded
Brake Blocks



Raylok & Ray-Mett
Clutch Facings



PGT Heavy Duty
Truck Sets



V-Drive & Automatic
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Full Molded
Brake Blocks

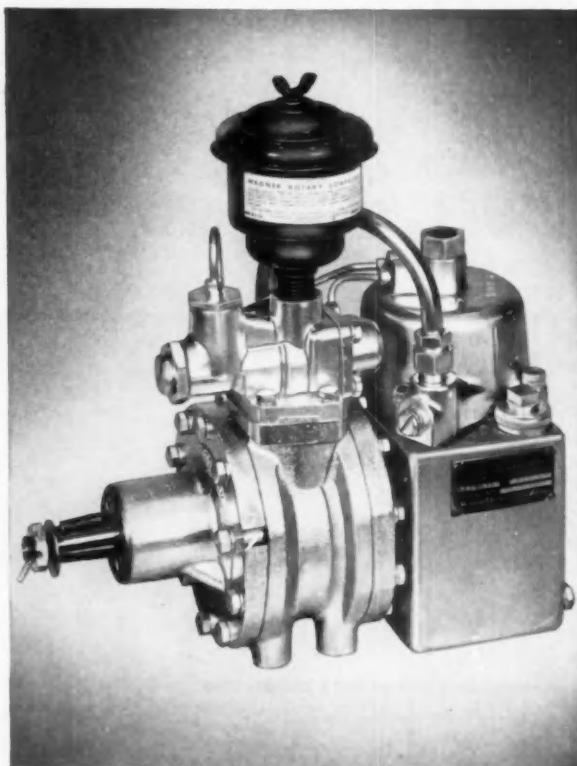
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AMERICA'S BIGGEST SELLING FRICTION MATERIAL



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., Bridgeport, Conn.

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**THE WAGNER
ROTARY COMPRESSOR
IS IMPORTANT IN MAKING
WAGNER AIR BRAKES
SAFE...EFFICIENT
...ECONOMICAL!**



Actual field analysis shows that Wagner Rotary Air Compressors are safe—efficient—economical. They provide plenty of air for any emergency... have fast air recovery... and consistently keep service costs low because of exceptionally long life and easy, infrequent maintenance.

Wagner Rotary Air Compressors, available in either 9 or 12 C.F.M. capacity, air or water-cooled, are *standard* with every Wagner Air Brake System. These Compressors are the only compressors that employ true rotary motion, with minimum friction loss. And because oil is separated and cooled before air is discharged, air temperature is reduced and formation of carbon, sludge and varnish in air lines is prevented.

But check all the cost-saving features of complete Wagner Air Brake Systems for yourself. A copy of Catalog KU-201, giving full information, is yours for the asking without cost or obligation. Write for your copy, today! And remember, when ordering new equipment, be sure to specify Wagner Air Brakes.



**WAGNER MOISTURE
EJECTION VALVE**

is one of many important Wagner Air Brake Components available to you. This fully automatic valve keeps air reservoir clean and dry.

Operating in the 15 to 20 p.s.i. air pressure range, it ejects moisture with each average brake application without causing a noticeable drop in tank pressure. May be mounted in any convenient location. No heating element is needed, as this valve cannot freeze in open (exhaust) position. Installation is quick and easy.

K57-2

Wagner Electric Corporation 6470 PLYMOUTH AVENUE • ST. LOUIS 14, MO., U. S. A.

Wagner Air Brake Systems



LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMoX BRAKE LINING • AIR BRAKES • AIR HORNS • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

DOUBLE YOUR FLEET LIFE

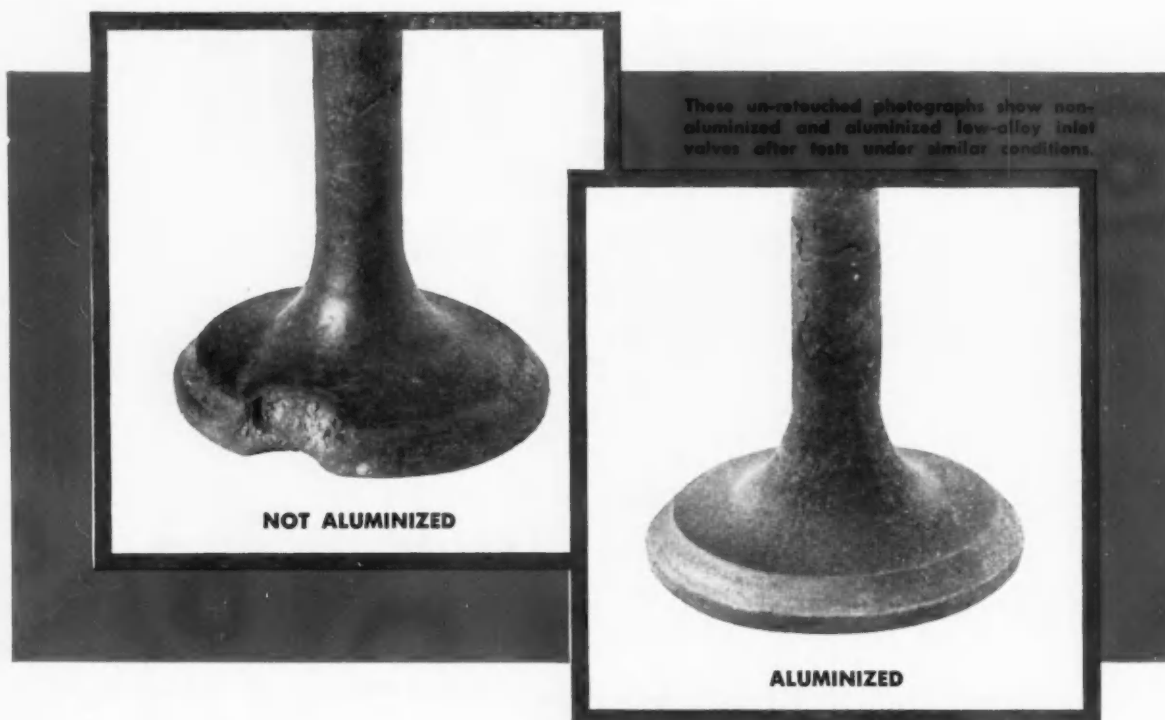
WITH
Long-Life **DIVCOS!**

Replacing worn-out delivery trucks every 5 or 6 years is a big waste of money. We deliberately build DIVCOS to provide long, economical, trouble-free service for 10-15 profitable years. If you expect to stay in business that long, you should slash fleet costs drastically by ordering Long-Life DIVCOS.



Over 80% of all DIVCOS built are still in use!

DIVCO TRUCK DIVISION — DIVCO-WAYNE CORP., DETROIT 5, MICHIGAN



For Important Savings in Your Engine Costs Use EATON Aluminized Inlet Valves

Modern high-output engines require inlet valves with superior scale resistance. Heat resistant alloys have solved this problem, but at a cost premium. Valves made of low cost materials and aluminized by the Eaton aluminizing process have corrosion resistant qualities equal to, or better than, valves made of higher priced alloy materials.

Let our engineers help you apply the cost-saving benefits of Eaton aluminized inlet valves to your engines.



Plain carbon steel valve with aluminized face after exaggerated test of 16 hours in air atmosphere at 2000°F. Note the gross oxidation of the non-aluminized stem area and the excellent condition of the aluminized seat-face and margin.

EATON

— VALVE DIVISION —
MANUFACTURING COMPANY
9771 FRENCH ROAD • DETROIT 13, MICHIGAN



PRODUCTS: Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Hydraulic Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Forgings • Heater-Defroster Units • Automotive Air Conditioning Fastening Devices • Cold Drawn Steel • Stampings • Gears • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

FISK'S MAGIC CARPET OF STEEL



Between your trucks and 80% of all truck tire failures

EIGHTY PERCENT OF YOUR TIRE FAILURES are caused by tread injuries that work back to ruin the carcass. Even the toughest fabric breakers offer little protection against such injuries.

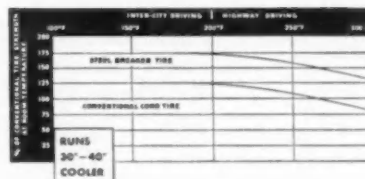
But in the Fisk Steel Breaker Tire, there is a 2-ply web of 1290 steel cables to shield the carcass in the vital tread area. Sharp objects can't cut the steel. Bruises and cracks can't spread! Heat is carried off before it can cause tread-growth or separation!

You get full mileage from the

original tread—plus more and better recaps without costly section repairs. Yet there is no increase in inflation, no hard ride, no limit on speed.

IN OVER 5,000,000 MILES of tests by truckers and engineers, not a single cut or rupture pierced the Steel Breaker.

Call your Fisk distributor today for the full story and a set to test under your own operating conditions. See for yourself how these tires help you *reduce down-time, maintain schedules and cut your tire-cost-per-mile!*



PREVENTS OVERHEATING! Steel eliminates bulk in shoulder and heat build-up from flexing. Crown strength at 300° is almost double that of ordinary tires. Steel retains full strength at any speed and at extreme temperatures.



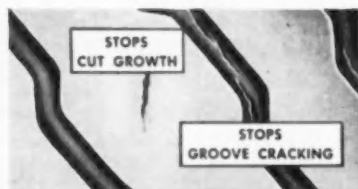
X-RAY PROOF!

WON'T CUT! Sharp ax that would ruin an ordinary tire is stopped by Steel Breaker before it reaches the carcass. Sharp stones, glass, jagged metal are stopped in the same way—and tread cuts are kept from spreading—by Steel Breaker.



X-RAY PROOF!

WON'T RUPTURE! Crashed into a deadly rupture-cone, the Fisk Steel Breaker "gives" but does not break. The shock of impact is absorbed by the steel—never reaches the carcass. On the road, this means extra blowout-protection!



PROTECTS TREAD AND CARCASS! Steel Breaker blocks carcass growth from tread area, eliminates growth strains and stresses, groove-cracking, and cut-growth. Steel relaxes tread rubber for higher mileage, greater resistance to cutting.

FISK

STEEL BREAKER

TIRES



TIME TO RE-TIRE
BUY **FISK®**

DIVISION OF UNITED STATES RUBBER



Laugh it off!

CATTY CORA: I SAW MYRTLE AT THE BEACH LAST SUNDAY."

SAFETY SADIE: "SURE ENOUGH? I HEARD SHE HAS A NEW BATHING SUIT. WHAT COLOR WAS IT?"

CATTY CORA: "I REALLY DON'T KNOW. SHE HAD HER BACK TURNED TOWARD ME."

CCJ

Traffic Rate Clerk: "Gee, doll-face, its real peachy of you to accept my marriage proposal. Now, how am I going to win the approval of your strong-willed, domineering, old battleaxe of a mother?"

Intended Bride: "Well, for one thing, you could act more manly. Frankly, mother thinks you are effeminate."

Traffic Rate Clerk: "Do tell, do tell. Compared to her, well, maybe I am."

CCJ

Automotive Parts Clerk: "Come on, Sugarpuss, how about a little kiss?"

Cautious Cutie: "My lips are chapped."

Auto Parts Clerk: "Well, one more chap won't hurt them."

CCJ

Tank Truck Driver: "I'm looking for someone to lend me five bucks."

Truck Dispatcher: "Well, my good man, you've got a nice day for it."

CCJ

LEADFOOT LOUIE SAYS: "HAVE YOU HEARD ABOUT THE SCOTSMAN WHO TOOK HIS GIRL TO THE BEACH AND TOLD HER SHADY STORIES SO HE WOULDN'T HAVE TO RENT A BEACH UMBRELLA?"

Steno Lou: "For the life of me, I can't see why you want to marry that utility helper out in the maintenance department. He's just an everyday sort of man."

Steno Sue: "Shucks, Louisa, what more could any girl want in a husband?"

CCJ

Diesel Mechanic: "What kind of oil do you use in your car?"

Shop Foreman: "Oh I usually tell them that no one understands me, and that I'm sensitive and lonely, and so on!"

CCJ

Safety Sadie: "If Herman never attempts to neck with you, why do you continue to go out with him?"

Catty Cora: "Oh, I guess it's just because he's such a relief after a hard day at the office."

Cici Jay



"Oh, the usual. What's new with you?"

Air Brake Specialist: "Is your brother getting along any better with his wife these days?"

Ignition Specialist: "Oh, positively. He was out only one night in an entire year."

Air Brake Specialist: "Wow! I call that real devotion."

Ignition Specialist: "Call it whatever you want. The doctor calls it arthritis."

CCJ

DIESEL TRUCK DRIVER: "HONEY-PIE, I'D GO THROUGH FIRE AND WATER FOR YOU."

SWEET PATOOTIE: "OKAY, BIG BOY, MAKE IT WIRE. I'D RATHER HAVE YOU HOT THAN WET."

CCJ

Yard Hostler: "My wife says if I don't give up my Friday night poker sessions she's gonna leave me."

Shuttle Driver: "That's tough, boy."

Yard Hostler: "Yeah. I'm gonna miss her."

CCJ

Catty Cora: "I'd like a design to match my nickname. Can you tattoo a cat on my knee?"

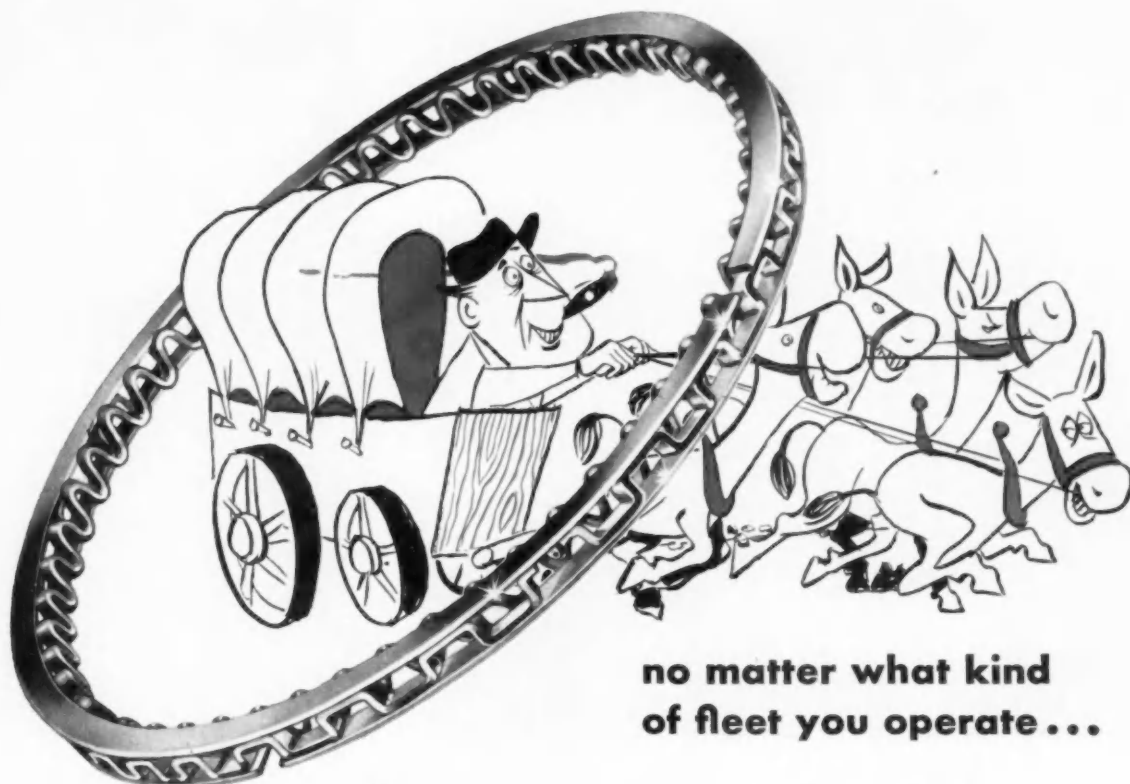
Tattoo Artist: "Yes, of course. But we're running a special sale on giraffes this week."

CCJ

Steno May: "I remember hearing an old proverb about people who live in glass houses, but I can't remember the rest of it. What is it that people who live in glass houses should not do?"

Steno Fay: "Anything with the lights on!"

Resume Work

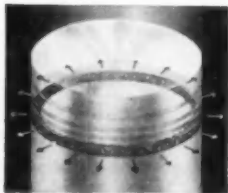


**no matter what kind
of fleet you operate ...**

***Pedrick* FORMFLEX CHROME RING SETS**

can reduce your operating and maintenance costs

Is it stop-and-go delivery service? Or interstate transport? Or local or long-distance passenger service? Or heavy-duty construction or excavation work? It matters not. Pedrick Formflex Chrome Piston Ring Sets are the most universal in their application—both as to type of vehicle and service and as to condition of the engine.



**EQUAL PRESSURE
EVERYWHERE MEANS A
PERFECT SEAL**

The exclusive "Equalizer" of the Formflex oil rings is one reason for the exceptional performance they give. It provides a soft but positive pressure against the two flexible steel rails at every point around the circumference. The result is a conformability which provides exactly the right oil control to keep the cylinder area lubricated without waste and without unnecessary wear.

Metering a minimum but adequate oil film to the compression rings assures a more perfect compression seal to produce maximum power and fuel economy. Combustion heat, too, is transferred more efficiently through the thin oil film and the cylinder wall to the coolant, thus preserving lubrication and minimizing wear.

CHROME on the face of the steel rails of the Formflex oil rings and **CHROME** on the face of the top compression rings protect still further against wear and increase life from 2 to 4 times.

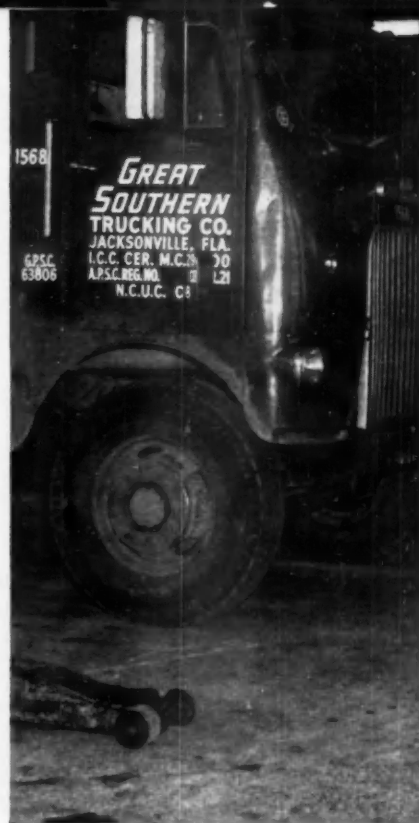
So, in *your* fleet, to reduce down-time and road tie-ups, and to improve operating economy—when piston rings are needed, always install Pedrick **FORMFLEX CHROME** Sets.



WILKENING MANUFACTURING CO., Philadelphia 42 and Toronto 2



Mr. James A. Ryder, President



Bendix-Westinghouse Air Brakes **at low cost they give**



Bendix-Westinghouse has produced nearly 2,000,000 air brake compressors over the past twenty-seven years—far more than any other manufacturer. This experience is your guarantee of excellence. TU-FLO 400 model shown above is designed for the medium and heavyweight classes. Other Bendix-Westinghouse compressors are for the light- and extra-heavy-duty classes.

From Great Southern Trucking Company's general headquarters in Jacksonville the 21-year-old company serves 7,888 route miles in Alabama, Florida, Georgia, North Carolina, South Carolina, and Tennessee. As the largest motor common carrier in the Southeast, this company operates 572 tractor-trucks and 356 straight trucks from 36 terminals.

A Secret of Safe Trucking

Great Southern is owned by Ryder System, Incorporated, which operates common carriers and truck leasing companies in the United States and Canada. President James A. Ryder, a firm believer in safety,

More trucks travel more miles with

can
GR

recently
on safe
always
They're
The G
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BENDIX-WE



Mr. D. D. Hodges, Director of Maintenance



Mr. W. M. Baker, Driver

can give you the same safe stops **GREAT SOUTHERN TRUCKING CO.!**

recently said, "To a large extent, safe driving depends on safe equipment. That's why, for our vehicles, I always insist on Bendix-Westinghouse Air Brakes. They're the world's safest."

The Great Southern's books furnish factual proof of other Bendix-Westinghouse benefits. Last year the company's line equipment rolled up a total of 32½ million miles. Although the loads averaged 10.2 tons, the average brake lining life was 125,000 miles. And the rigs travelled an average of 200,000 miles between compressor overhauls. Meanwhile, the Bendix-Westinghouse Air Brake equipment helped increase driver confidence and efficiency.

Records such as these are outstanding but not unique. Similar results are experienced with Bendix-Westinghouse Air Brakes by literally thousands of truck operators.

Do You Want Low-Cost Dependability?

The next time you order a truck, specify Bendix-Westinghouse Air Brakes. Or consult your Bendix-Westinghouse distributor about converting your present rigs to air with field installation kits. Either way you can have the same advantages that help others establish outstanding records for top efficiency with economy.

Bendix-Westinghouse than with all other air brakes combined!

Bendix-Westinghouse



AIR BRAKES

CCj BULLETIN BOARD



Grim Harvest

Judging from the crop of accidents they've been harvesting, there's quite a bunch of farmers on the nation's highways these days. Some of 'em may be like the old-timer who refused pointblank to let his county agent try to teach him new scientific farming methods.

"Hell, son," he told the agent, "I ain't farmin' anywhere near as good as I already know how, now."

Maybe this attitude is OK for an old guy who wasn't going anywhere anyhow. But when a driver starts thinking this way, he's asking for trouble. When a farmer makes a mistake, he can plough the crop under. When a driver goofs, though, he's the one that's liable to be ploughed under.

Next time you catch yourself not driving as well as you know how, remind yourself that you're extending an invitation to the Grim Reaper.

CLIP AND POST ON YOUR OWN BULLETIN BOARD — REPRINTS AVAILABLE AT NOMINAL COST

NEW, LOW-COST **Snap-on** ELECTRICAL TESTERS

IMPROVE TUNE-UP, BOOST INCOME



MT-415A Tach-dwell meter

Tach scale checks engine rpm for servicing automatic transmissions, balancing cylinders, adjusting carburetor idling and high-speed jets. Dwell scale is used to check dwell or cam angle and resistance of breaker points; set breaker points.

MT-401 Generator-regulator meter

Tests the generator, checks regulated amperes, cutout and regulated voltage. It is also used to test battery and locate electrical leaks.

2002A-MT-B Set

\$11.75 down \$3.00 per week

Prices subject to change without notice.

These new, low-cost *Snap-on* electrical testing units quickly spot troubles in the ignition and electrical systems — improve work quality on specific checks and over-all tune-up jobs.

Accurate — Portable — Simple

The new MT-415A Tach-dwell meter shows tach scale and numerals in black, dwell numerals in red for easy, separate readings. Unit has long 7½-foot leads with color-coded, insulated alligator clips. Handles 6-12-24 volt systems.

The new MT-401 voltage regulator tester uses the highest quality current shunt to give

greater accuracy and longer service. Six-foot leads give plenty of coverage for any job.

Testers are completely self-contained — need no outside power. Both units have large, easy-to-read scales — needles have jewel bearings for free, accurate readings. These meters are strong, yet light and easy to handle on the road and in the shop. Handle-equipped cases are made from tough, phenolic resin. Metal carrying case holds and protects units during travel.

Clear, easy-to-understand instruction books packaged right with units make operation simple for any mechanic. Here is your opportunity to get this profit-boosting test equipment at a new low price — and on easy terms. Check your *Snap-on* man for details.

TRADEMARK OF
SNAP-ON TOOLS
CORPORATION

8026-I 28th Avenue • Kenosha, Wisconsin



How the Du Pont Anti-freeze save you work,



1. Pick the best!

Photograph above shows why your costly equipment is safest when you winterize with Du Pont Zerone® or Zerex® anti-freeze.

Flask "A" contains a solution of ordinary anti-freeze with an oil inhibitor. Flask "B" contains a solution of "Zerex" with Du Pont's exclusive chemical inhibitor. To each was added the same amount of ground rust. Flasks were shaken and contents poured. Notice how film of rust clings to the inside of Flask "A" just as it would to cooling system. But Flask "B" with "Zerex" is clean—rust particles stayed in suspension—drained out with the solution. Du Pont's chemical inhibitor will never form an oily film of rusty sludge that could clog radiators, causing overheating and serious engine damage.

This is just one of the many advantages you get when you protect your equipment from freeze-ups, rust and corrosion with either "Zerone" or "Zerex" anti-freeze. Pick the Du Pont anti-freeze best suited to your needs and you have taken the first step in the anti-freeze preventive maintenance plan—that will save you work, time and money.



2. Pre-mix your anti-freeze

Both "Zerone" and "Zerex" will mix completely in water, and the rust inhibitor will not separate from the solution while standing. This permits you to pre-mix your anti-freeze solution to any degree of protection desired for use when and where you need it.

Stock your pre-mixed anti-freeze in any convenient place. It will keep indefinitely—always ready to use.

When anti-freeze is pre-mixed, installations can be made rapidly by unskilled help and without the need for individual time-consuming hydrometer checks. What's more, guesswork and the chance of costly overprotection are avoided and pilferage problems are discouraged.

Take advantage of the total savings possible when you pre-mix with Du Pont "Zerone" or "Zerex"—the quality anti-freezes that can be pre-mixed with water to stay!

Freeze **PM** Plan can PREVENTIVE MAINTENANCE time and money!



3. Use the "Zerex" Test Kit

Thousands of dollars' worth of equipment is ruined each year because winter-worn anti-freeze is left in the cooling system to turn acid and cause rust and corrosion.

Now for the first time Du Pont makes it possible for you to tell — right on the job — which "Zerex" anti-freeze solutions are safe to re-use and which are worn out and should be replaced with a fresh "Zerex" solution. In this way, you can reduce cooling system maintenance expense and cut your "Zerex" anti-freeze costs in half!

And remember, *only* "Zerex" anti-freeze can be safely analyzed — on the job — with the exclusive "Zerex" Anti-Freeze Test Kit. This new method for testing reserve alkalinity in "Zerex" anti-freeze is a development of Du Pont research. It helps make possible an anti-freeze preventive maintenance plan that will save you anti-freeze and cut your operating costs.



*Your best
anti-freeze buy!*

Note to maintenance supervisors and anti-freeze buyers: When you consider the value of the equipment you use, the investment your anti-freeze must protect and the expense of needless downtime, an efficient anti-freeze preventive maintenance plan makes good business sense.

The continuing savings made possible with "Zerone" and "Zerex" and an Anti-Freeze PM Plan far outweigh any momentary saving you might gain by using anti-freeze products of questionable performance and low initial cost.

Contact your Du Pont anti-freeze supplier or mail the coupon today — start saving now with the Du Pont Anti-Freeze PM Plan.



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
"Zerone"-Zerex" Section, Nemours 2420
Wilmington, Delaware

CC1-9

Please send me more information about the Anti-Freeze PM Plan.

Name _____

Address _____

City _____ State _____

Company name _____ Title _____

Exclusive in International Trucks

New Select-O-Matic®

Most economical, most efficient automatic type truck transmission

Now it's a reality! A transmission that cuts trip time and reduces maintenance! A transmission that gives you greater fuel economy and makes driving easier! It's the new INTERNATIONAL Select-O-Matic!

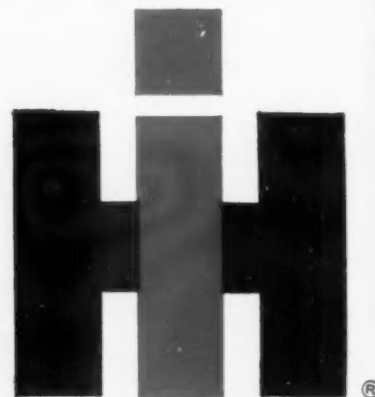
Select-O-Matic costs less than most other "automatics." Costs *least to operate* because exclusive design and manufacturing make the new Select-O-Matic the most efficient of all. Costs *least to main-*

tain, too. Simplified, dependable INTERNATIONAL construction requires minimum service.

Find out what this new Select-O-Matic in an INTERNATIONAL Truck can do for you—you'll have an unbeatable profit-making combination!

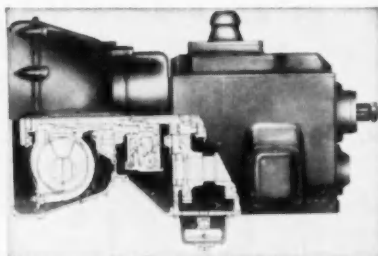
And remember, INTERNATIONAL Trucks cost *least to own.*

INTERNATIONAL HARVESTER COMPANY, CHICAGO
Motor Trucks • Crawler Tractors
Construction Equipment • McCormick®
Farm Equipment and Farmall® Tractors



**INTERNATIONAL
TRUCKS**

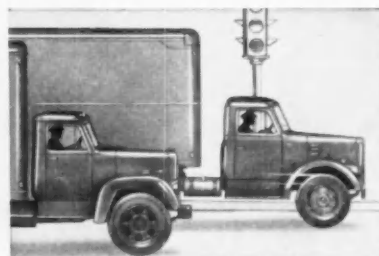
cost least to own!



1 Low purchase price, low upkeep costs. Initial cost is less than most automatic type transmissions. Maintenance time and costs are way low, due to oil-cushioned power that eliminates engine lugging and shock loads. Greater fuel economy, too.



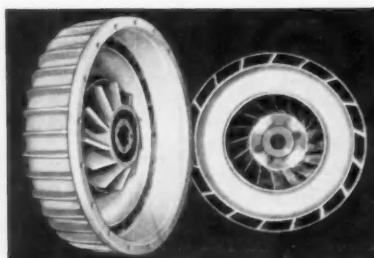
2 Easier to drive. No tiring, bothersome double clutching, no gear splitting. Magic button conveniently located under gear shift knob electrically controls the clutch. Shifting is faster and smoother, completely effortless and less frequent.



3 New Select-O-Matic transmission with 2-to-1 torque multiplication gets your loads moving quicker. Acceleration is faster. Speeds are more constant on all types of terrain. Faster schedules, higher average road speeds and less shifting.



4 Completely driver-controlled at all times for safer driving. Proper gear selection, up and down, is determined entirely by the driver to meet the particular situation. Unwanted, dangerous gear changes are eliminated under all conditions.



5 Greatest efficiency of any torque converter type transmission. Exclusive mirror-smooth interior finish. Variable displacement oil pump that saves up to 8 horsepower. Power-saving, low viscosity fluid in transmission, too.

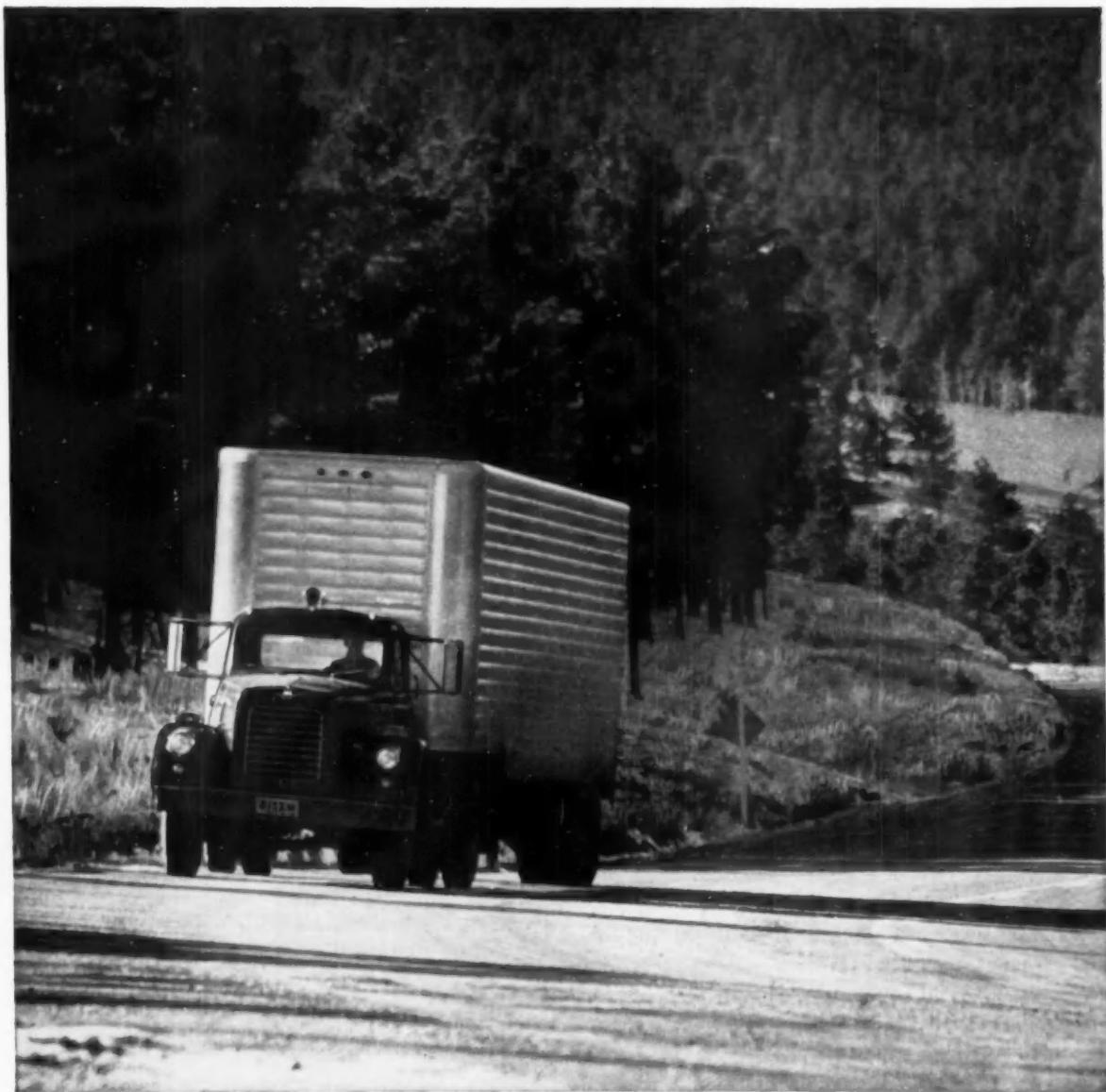


6 No clutch pedal. Exclusive electro-hydraulic single disc clutch is either positively engaged or completely disengaged. There is no slippage at any time. Wear and costly adjustments are eliminated. Electrically controlled.

INTERNATIONAL
transmission
converts

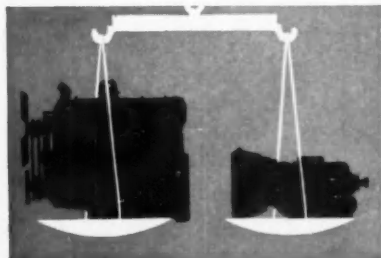
7 Balance
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COMMERCIAL



INTERNATIONAL Trucks with new Select-O-Matic transmission—the unit that has a high-efficiency torque converter and electro-hydraulic clutch coupled with a syn-

chromesh transmission—makes driving easier and safer. Now available in conventional and COE models with 19,000 to 41,000 lbs. GVW, up to 62,000 lbs. GCW.



7 Balanced combination. New Select-O-Matic transmission is designed and built by INTERNATIONAL specifically for truck use. Each unit is properly matched to the particular INTERNATIONAL engine to save fuel, increase reliability.



8 Infinite number of gear ratios with torque converter and 5-speed synchromesh transmission makes driving easier, simpler. Maintain faster schedules. More economical by eliminating the need for an auxiliary transmission or two-speed axle.



9 World's most complete line. There is an INTERNATIONAL "tailor-made" for every truck job, half-tonners to 96,000 pounders, conventional and COE design. Every one built for extra dependability and profitable operation... built to cost *least* to own.

Beginning

A **CCJ** Visit With



By Bill Palmer

For a Specialized Fleet Spread Across the Nation Coordination Is the Answer

Have you ever wished you could take a couple of weeks from your own job to visit with another fleet operator and study his operation?

Sure, that's an impractical dream — strictly "cloud nine" stuff. But it's a wish that more than one fleetman has expressed. Few of them, however, have had any hopes of having the wish granted.

But now, in **COMMERCIAL CAR JOURNAL** you can enjoy the next best thing.

We had a skilled writer make the visit for you. He spent days gathering facts, opinions, ideas and pictures. Then he proceeded to turn out a series of articles designed to answer the questions you might have asked if you had made the visit.

We think you'll like the results. First, starting at right, you get an overall picture of Dowell Inc.'s operation. Then, getting down to practical details, you'll find on page 69 a description of Dowell's method for determining how many mechanics to assign to each of its many shops. In future articles in the series you'll find out, among other things, how the company cut its hiring costs by 50 per cent, how it keeps its shops and supervisors supplied with up-to-date information, how it keeps its accident rate low, how it keeps its vehicles in top shape, and how its training program turns out a supply of supervisors who are ready to step into bigger jobs as the need develops.

Never before have we carried such a detailed report on a single company in **CCJ**. That alone makes this an exceptional series. After reading it, we think you'll agree it's exceptional in many other ways . . . The Editors

YOU CAN SUM UP Dowell, Inc.'s operation as a big, growing, scattered, coordinated organization of specialists. In effect, it's a big collection of small fleets, with more than 2500 vehicles spread among 90 stations around the country.

In 24 years the firm has grown from less than 50 employees to more than 2300. Today it has an average of more than 200 hp on wheels for every man and woman in the organization. Included in the fleet: 916 trucks, 674 trailers, all with a variety of powered auxiliary equipment; 158 skid mounts; 61 pickup trucks and 682 leased passenger cars.

Nationwide Fleet

Stations are spread from Alice, Texas, to Stoneham, Mass., and from Jacksonville, Fla., to Fort St. John in upper British Columbia, Canada, as shown in the accompanying map. There is also a subsidiary operation in South America.

Only one or two vehicles may be assigned to the smallest stations. The largest may have as many as 35. Numbers and types of units at many stations change almost from month to month due to variations in workload and improvements in equipment design.

Dowell, Inc., "doctors" oil and gas wells, occasionally water wells. Other services include cleaning rust, scale and sludge out of industrial equipment. Clients range from the largest powerhouses, steel mills, automobile manufacturers and ship lines down to laundries and dairies. A choice of more than 50 different treatments and special products is available.

Drivers' duties involve considerably more than operating their vehicles. All are responsible for operating the auxiliary equipment on the job. Their tasks range from loading and emptying vans to operating remote-controlled pumpers and "electric pilots." The

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"pilots" are oil well surveying units which carry as much electronic gear as a medium bomber.

Each operator is responsible for \$60,000 to \$100,000 worth of equipment. Often he will have the only unit of its kind at the station, and a replacement may be 600 or 1000 miles away. He must see that the equipment's PM service is performed on schedule, and takes care of some of it himself.

The company now has an effective system for

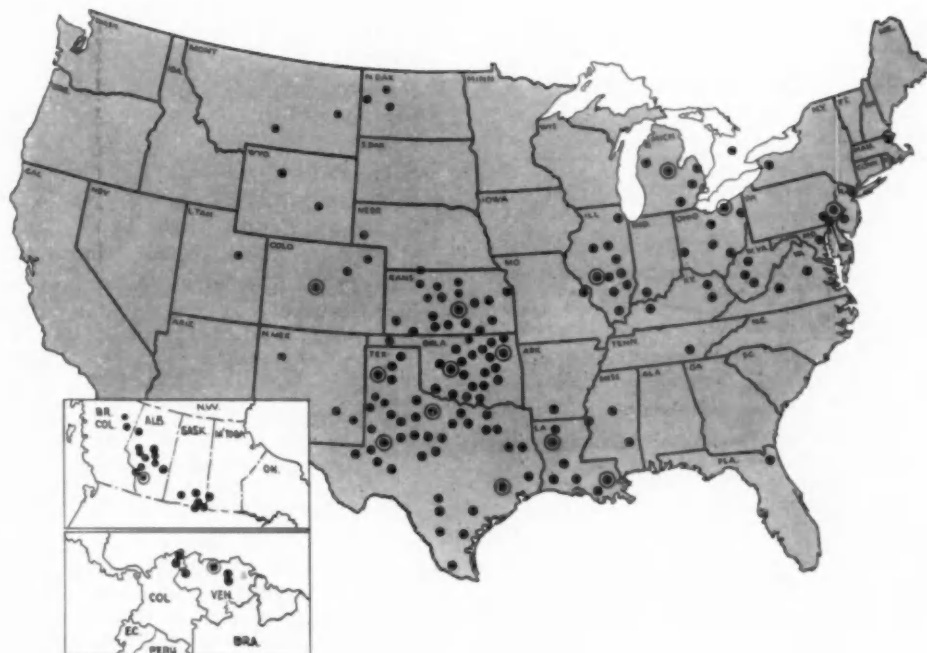
selecting, training and upgrading its equipment operators. This will be described in a future article in this series.

Maintenance ranks high at Dowell. Since a client is usually holding an oil well or piece of industrial

(TURN TO NEXT PAGE, PLEASE)



Dowell has more than 2500 vehicles in some 90 locations as shown in the map below. Some units are in cities, others face rugged off-highway conditions in the oil fields. Maintenance rates high with Dowell, since equipment failures mean delays in service to customers and can throw the organization off balance. To keep the fleet rolling, home office specialists advise and coordinate activities of district and station managers



equipment out of production for the treatment, he usually take a dim view of any delays. Secondly, a failure is costly to Dowell, since even on jobs involving many units a breakdown of one can throw the others off balance enough to reduce their efficiency.

In all Dowell has 90 operating stations grouped into 15 districts, ranging from three to 10 stations per district. Each district has a general manager, service manager and maintenance supervisor or district shop foreman. Most operations policy is decided at district level.

There is a manager at each station, regardless of size. He is usually assisted by a service manager in charge of operations (as distinguished from sales). Depending on the size of the shop he may have a shop foreman, a lead mechanic, a single mechanic, or in some instances the equipment operators handle full preventive maintenance and the shop work is farmed out.

Home Office Advises

General office (GO) personnel are not "line" officers, but "staff" specialists ready, willing and able to advise either station or district personnel.

Broad policy is made in GO at Tulsa for sure, but it literally has to be sold in the districts before it spreads throughout the company. This means the department heads and specialists in Tulsa are a well-travelled group of men.

Station managers don't always "buy" right away, though in most cases they gradually swing to newly recommended techniques. At the same time, because their initiative isn't stifled, they often come up with improvements or new angles. Then GO is able to

Dowell has a system for assigning mechanics where they're needed. Here's how it's done

spread the innovation rapidly throughout the organization. Many of Dowell's best techniques were first developed in the field, without GO blessing and often without its knowledge.

In its advisory capacity, headquarters can divide burdens among many specialists more freely than can be a line organization. Because there is less question of "whose authority," conflicts don't arise. Also, because many of the GO staff are in the field more than 50 per cent of the time, they all are accustomed to helping out in each other's department when a call for assistance comes in.

MAINTENANCE POINT SYSTEM

MODEL NO. AUTH. NO

UNIT DESCRIPTION	MAINT. POINTS
Engine-Truck	6
Engine-Auxiliary 2 Cylinder	2
Engine-Auxiliary 4 Cylinder	4
Engine-Auxiliary 6 Cylinder	6
Engine-Auxiliary 8 Cylinder	6
Engine-Auxiliary 12 Cylinder	12
Engine-Auxiliary (1) GMC	4
Engine-Auxiliary (2) GMC	8
Transmission-Main	2
Transmission-Auxiliary	2
Power Take Off	2
Power Divider	2
Differential	2
Bogie Assembly	1
Front End Assembly	2
Triplex Pump	1
Tank & Piping	2
Winch & Accessories	1
Reel & Accessories	1
Rotary-Pump	1
Gear-Pump	1
Centrifugal-Pump	1
Speed Reducer	1
Speed Increaser	1
Right Angle Drives	1
Compressor-Gas	4
Chassis	1
PIV	2
Hydraulic-Pump & Motor	2
Converter	4
Remote Controls	2
Petro Frac	2
Totalizer Kit	1
2—500-gal Paddle Mixer Tank	2
1—1000-gal Paddle Mixer Tank	2
3000-gal Paddle Mixer Tank	3
Fire Control	2
TOTAL POINTS	
DIVIDING FACTOR ÷ 3	
1 POINT = 1 MAINT. HOUR	

Service needs of each unit are shown on this form. Points are based on average man-hours needed per year to keep the equipment in condition. A new form is made up when accessories are changed. Total point value of all vehicles at a shop determines how many mechanics it needs

Point System Shows Mechanic Quota

Here's how Dowell has mechanics where they're needed, when they're needed, even when vehicles move from shop to shop



Main maintenance shop at Tulsa, Okla., will eventually be entirely converted for the construction of equipment exclusively as Dowell, Inc., continues to establish base shops at strategic locations in its international system

VEHICLES IN the Dowell, Inc., fleet are transferred from station to station in the company network as the need arises for the equipment they carry.

How do you make sure you have enough mechanics where and when they're needed in this type of operation? Dowell solved the problem with what they call their "Maintenance Point System."

How It Works

The point system was built on an initial study of the amount of work which each component and piece of auxiliary equipment required if it was to be adequately maintained. An estimate was made to determine the number of man-hours per month, averaged over a year, needed for each component. No attempt was made to distinguish makes or models.

Thus a set of representative monthly work needs for each component was arrived at, such as 18 hours for an engine, 6 hours for a transmission, 6 hours for a differential, 3 hours for a chassis, etc. These then had to be expressed in terms of a week's work for a mechanic. So each monthly man-hour total was divided by three (three weeks). The "three" allows for the maintenance work done by the equipment operators and by unskilled helpers. If all maintenance work was to be done by mechanics, "four" would be the proper divisor.

Points Set the Pace

The results are called "points" rather than "man-hours." This avoids giving the idea that so many hours per week are necessary each week. The points account also for monthly, quarterly and annual inspection and servicing. All fractions were rounded out to the nearest half so that full point values are assigned to each component.

Point values of all components are shown on a mimeographed form which is written up for each vehicle. New forms are prepared whenever there is a change in the auxiliary equipment or components used on the vehicle.

The form is reproduced at left. As you can see, it is a simple matter to arrive at the total point value of the vehicle. This point value is then noted on a 4 x 6 in. file card which is kept for each vehicle in Dowell's records department at Tulsa. The card also carries a brief description of the unit with enough information on it to make clear what the vehicle is capable of doing. Cards are filed by station and district groups. When a vehicle is transferred from one station to another its card is transferred to a new location in the file.

(TURN TO PAGE 130, PLEASE)

Such unusual equipment as this receives more of Dowell's maintenance points for shop work than ordinary vehicles. Through the use of the point system, the company allots the correct number of technicians for the work required



JURISDICTION

● Are the Safety Regulations for private and "exempt" carriers the same in all respects as for for-hire carriers?

Generally, yes—although there are some exceptions. Private carriers are not required to file accident reports or reports of excess hours of service as for-hire carriers (including "exempt" carriers) are. Some modifications in Hours of Service regulations are provided for driver-salesmen, and drivers of trucks operated by a farmer. The physical examination rules do not apply to a farmer's drivers and the age requirement is modified if the vehicle and load is under 10,000 lb. As to carriers of "exempt" commodities,



Blanning and Cox Answer ICC Safety

Exclusive interview with the men who know clarifies safety requirements of

the rules are the same as for other for-hire carriers.

● In the case of leased operations, who is responsible for compliance with ICC Safety Regulations—the owner of the vehicle or the person to whom it is leased?

The person or firm to which it is leased is responsible. However, some regulations apply **both** to the carrier and driver, as well as other carrier representatives. So, if the owner is also the driver, he, as well as the lessee, is responsible for compliance.

● Should all state requirements coincide with ICC regulations? If so is anything being done in that respect?

Yes. The ICC regulations are basically necessary as a minimum standard. They are reasonable and time-tested. Twenty-nine states already have adapted

them in large measure. Nearly all states follow them in some respects, such as vehicle lighting requirements. The Commission has frequently urged that further steps be taken. There may be some exceptions. The ICC rules are designed primarily for over-the-road operations and might be modified in part for local operations.

● Pick-up and delivery trucks of an interstate carrier frequently operate only intrastate. Must they meet any ICC requirements? If not, can you outline which ones?

If such trucks handle **intrastate** traffic only, they need meet no ICC requirements, even if they are operated by an interstate carrier. But such trucks, even though operating physically within a single



ICC motor carrier safety expert Ernie Cox (second from left) gets ready to bat out an answer to a hot question on the safety regs pitched by CCJ editor Bart Rawson (far right). W. Y. Blanning (third from left), Bureau of Motor Carriers director, is also in the batting order, with Ray Stroupe (far left), from CCJ's Washington office, keeping score

Questions

for-hire, private and "exempt" carriers

state, more often do transport interstate shipments, and, where so doing, are subject to ICC regulations.

● Can I be engaged in interstate commerce without crossing a state line, and therefore, be required to comply with ICC safety requirements?

Yes. Even though your vehicle does not physically leave a state, it may be transporting goods moving in **interstate** or **foreign** commerce. Examples: a truck hauling shipment taken from a railroad pool car at Chicago to Peoria and other Illinois cities, or a truck hauling shipments from points in Texas to a ship dock at Galveston. A vehicle can be in operation in a single city within one state, and be subject to **some** ICC safety regulations.

(TURN TO NEXT PAGE, PLEASE)

CCJ Went to Washington

Cross-country road checks by the Interstate Commerce Commission (Aug., page 72) have fleet operators asking questions about the ICC Safety Regulations . . . some pretty tricky ones. So Commercial Car Journal Editor Bart Rawson selected the questions most often asked in his contacts with fleetmen, took them to Washington and the ICC.

Here are the answers. They are right from the men responsible for fair administration of the highway safety requirements of interstate commerce—W. Y. Blanning, director of the ICC's Bureau of Motor Carriers, and Ernest G. Cox, chief of the Bureau's Safety Section.

For full text of the Safety Regs themselves write to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for "Motor Carrier Safety Regulations, Revision of 1952." Its price is 25¢. Changes since the 1952 revision are available without charge by writing Bureau of Motor Carriers, Interstate Commerce Commission, Washington 25, D. C.

... Answer ICC Safety Questions

... about Jurisdiction, Hours of Service, Maintenance, Equipment and Accidents

● Do these safety regulations apply to the operation of vehicles which never travel more than 50 miles beyond the business terminal of the driver?

Yes—if interstate or foreign shipments are involved. If a motor vehicle transporting such shipments operates wholly within a city or the commercial zone thereof, such as Cincinnati and nearby Kentucky points, no safety regulations apply except the **Hours of Service** regulations, unless the vehicle is transporting dangerous articles (acids, flammables, compressed gases) in quantities that require the vehicle to be placarded. If the operation extends beyond the commercial zone (a zone exists for every city in the country) all safety regulations apply. There is a 50-mile radius provision which exempts drivers from the **daily log** requirement, if some other conditions are met.

HOURS OF SERVICE

● What carriers are subject to the hours of service regulations but do not have to report violations or accidents?

Private carriers of property.

● If a driver works in my shop servicing trucks or doing other work from 7 a.m. until 12 noon and begins to drive a truck at 1 p.m., how long may he drive?

He may drive until he accumulates 10 hours of **driving time**—provided that in so doing he does not exceed the **weekly limit of on duty time** (60 hours in any seven consecutive days, or 70 hours in eight consecutive days). However, Rule 192.4 prohibits a person driving, or being permitted to drive, if his alertness is impaired by fatigue, illness, or other cause.

● Is time spent in crossing waterways on a ferry considered as "on duty" time?

No. A recent ICC decision provides that drivers

of trucks transported on a ferry may be considered off duty when the motor carrier has issued **written** instructions that drivers are not required to remain with trucks.

MAINTENANCE

● How long is the company required to keep maintenance records?

Daily vehicle condition reports made by drivers must be retained for at least three months (Section 196.7). Maintenance records kept by the carrier, as required by Section 196.2, must be retained three years.

● What is the necessity for filing "Daily Vehicle Inspection Report" in the case of a small private carrier whose drivers are responsible for the proper maintenance of their trucks? In other words, management and drivers are close and drivers are long-time employees.

It is important for the drivers to observe and **record** conditions which need correction. One vehicle of a small carrier is as vital as one unit in a large fleet. The prohibition against operation of a defective vehicle is directed to driver and carrier alike. If the daily record is made as required (it is a simple record), it permits the ICC to check on performance and, particularly in case of accident, helps to determine vehicle condition prior to the mishap.

● What inspection of the vehicle is the driver required by ICC to make? Does he have to make a written report of his inspection? What report is he required to make at the end of his run or tour of duty?

The driver, at the completion of his day's work or tour of duty is required to report, **in writing**, any defect or deficiency of the motor vehicle discovered by the driver which would be likely to affect the safety of operation of the vehicle or result in its

● **Does the ICC recommend a specific method for checking loss of pressure in air brake systems?**

Yes. We favor and our inspectors use the test included in the American Standards Assn. Inspection Requirement for Motor Vehicles approved Dec. 18, 1956. This is a two-part pressure drop test. Engine is operated until air pressure gage in cab shows normal 85 to 105 lb of pressure. First test

is with engine stopped and service brakes **fully applied**. Air pressure should not drop more than three pounds in one minute for single vehicles nor more than four pounds in one minute for combinations. Second test is with engine stopped and service brakes **released**. Air pressure drop should not be more than two pounds in one minute for single vehicles nor more than three pounds in one minute for combinations.

mechanical breakdown, or shall write that no such defects were discovered by or reported to him. A suggested form is shown in Section 196.9(a).

● **What maintenance records are required to be kept under the present ICC regulations now in effect?**

A systematic inspection and maintenance record including, at least; (a) an identification of the vehicle including make, model, serial number and number of tires, their size and number of plies; (b) a record of inspection and repairs indicating their date and nature; (c) a lubrication record; (d) a systematic means for indicating for each vehicle the nature and due date of the various inspection and maintenance operations to be performed. If vehicle is leased, or otherwise contracted for, such records shall also include an identification of the lessor or contractor furnishing the motor vehicle.

● **Are the maintenance forms shown in Part 196 of the Motor Carrier Safety Regulations required or simply suggested?**

They are recommended forms only. (For facts about what goes into efficient maintenance forms, see Apr. '53, page 68.—Ed.)

● **We have always been led to believe that mechanical defects have been responsible for a small percentage of truck accidents. If this is so, why are you placing so much emphasis on vehicle defects in your road inspections?**

Mechanical conditions are discoverable on a day-by-day basis and can, by systematic inspection, be controlled. Although percentage-wise defects in vehicles have not been shown to account for a major share of accidents, the share that they do cause is sizeable and can be eliminated or substantially reduced. This is not meant to de-emphasize the large number caused by imprudent speeds, fatigued drivers, or improper driving practices. We will continue to combat these causes in every way known to us, including our published accident investigation reports.

EQUIPMENT

● **How do you eliminate freezing problems in the breakaway emergency valve system? Anti-freeze ruins gaskets. Alcohol leaves a deposit, causing a salt corrosive. Dry gas appears to be the best material to use from most viewpoints, but it is too expensive.**

Most of the competent maintenance men who have discussed this with us say that regular draining of moisture from the airbrake system is an adequate and the only satisfactory method. Likelihood of trouble can be lessened by installations which avoid making the valve a moisture trap.

● **Since moisture in air tanks is a critical problem, wouldn't it be a good idea to set up a regulation requiring that tanks be drained at the end of every run?**

We have avoided this on the theory that we should not regulate simple matters that good practice and common sense dictate should be done. However, inspections made in recent months indicate so much disregard of drainage procedures that it may be necessary to propose such a rule. We would prefer to have management voluntarily provide for such matters.

● **Under emergency brake regulations, brakes will automatically lock when pressure drops to a predetermined point. This can be serious in heavy traffic or on icy hills. Should the requirement be modified?**

No. The required automatic application involves the trailer brakes only, and the rule requires it to occur only after the air pressure on the towing vehicle drops to 45 psi or lower (but not less than 20 psi). **Before this occurs** (except as noted below) the driver will have had a warning by the required low-pressure warning signal that his air pressure is low. If this warning is ignored, automatic action is necessary before it is too late to stop the driver who would otherwise continue to drive with the braking ability of his combination impaired by low air pressure or none at all.

(TURN TO PAGE 188, PLEASE)



SHOP HINTS

\$10 →

\$25



Send us a short description and photograph or simple sketch of the shop-made maintenance short cuts you are using. We'll pay \$10 and \$25 to those who submit good ideas

Homemade Tow Bar Has Flexibility

By Walter Rudolph, TransAmerican Freight Lines, New Erie, Pa.



This homemade tow bar, especially suited for slippery weather, combines an old drive shaft and a truck universal joint. Two 7/16-in. steel plates with bolt, clamp the tow bar to the disabled truck's front bumper. For added strength where the universal ties into the drive shaft, four 3/8 x 1 1/2 x 10 in. long flat stock were bent and welded to form a hook-type support to keep the universal from pulling out of the drive shaft. The front end of the tow bar has a piece of 1 x 2-in. flat stock welded on the spline, in which a slot has been cut for connection to the service truck tow hook.

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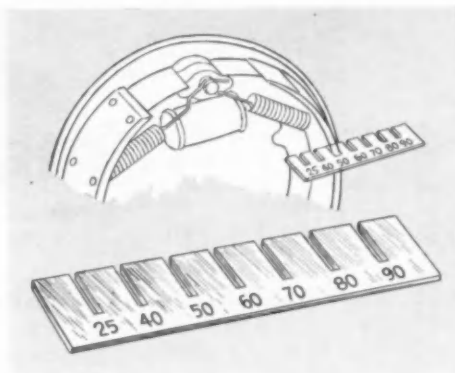
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Wear Gage Measures Brake Lining

By Ray Heron, Philadelphia Gas Co.

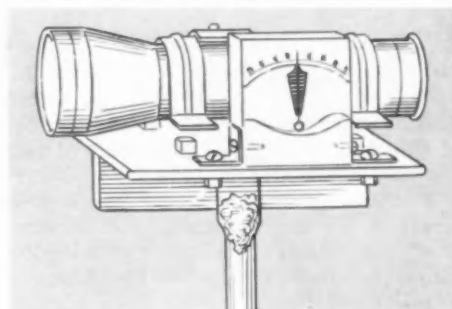
Here is a gage that will eliminate guesswork when checking the percentage of brake lining. Make up a set of gages for each size brake in your fleet. Measure the thickness of the new brake lining and shoe assembly and calibrate the gage accordingly. We find, for example, for Ford and Chevrolet 1/2-ton, .375-in. = 100 per cent, .3375 = 90 per cent, .300 = 80 per cent, .2625 = 70 per cent, .225 = 60 per cent, .1875 = 50 per cent, .09375 = 25 per cent.



Flashlight Aids Setting Headlight Tester

By G. Schlegel, Reo Motors, Philadelphia

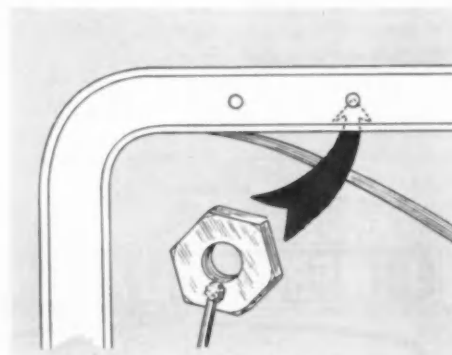
Make a support 48 in. high to accommodate a flashlight and a degree indicating level. This device will aid the mechanic to determine the amount of the slope, and also aid in adjusting the flashlight tester to compensate for floor slope. Raise the headlight tester to the height of 48 in. from the floor and place tester beside the vehicle. Put the flashlight stand even with the center of the rear wheels and face the flashlight into the headlight tester. Reset the tester until the hot spot of the flashlight shows through the headlight tester in the center of the screen.



Rod of Solder Helps Mount Mirror

By E. Tgettis, Nahant, Mass

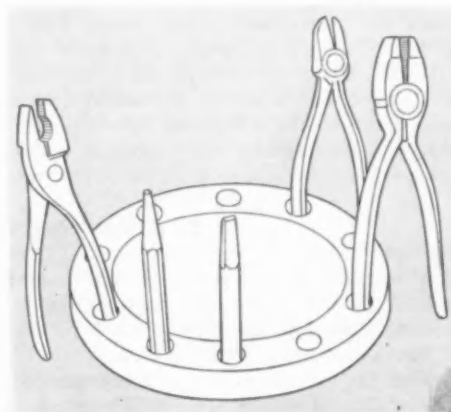
When installing West Coast mirrors on trucks, the job can be simplified by using this aid. Because it's often a problem to start the inside nuts on the top bracket bolts, attach a relatively long piece of solder to each nut. Then lower the window, drop the felt enough to insert the nut, and with the solder "handle" hold the nut in place until the screw is tightened. Simply break off the solder at the nut when installation is completed.



Truck's Axle Cover Makes Tool Holder

By Charles H. Willey, Concord, N. H.

For quick, easy selection of small and frequently used hand tools, use one or more truck axle heavy steel covers to support pliers, cutters, chisels, punches in the holes. Drill holes to accommodate special tools in the center of the plate. The weight of the flange will keep the tools from toppling over.



THREE ROUTES TO TRANSIT

A timely discussion of methods in use for increasing net revenues without

TRANSIT operators are in the same boat with the ice companies, movies, railroads and coal for heating—business is bad! Says American Transit Assn.'s latest report, transit traffic for the first half of this year is down 6.72 per cent as compared to the first six months of 1956.

With the trend since World War II toward a decrease in the use of transit—and consequently less profit—executives in the field have discovered that merely boosting fares is not the answer. The drop in riders usually offsets the revenue gain.

They are giving increased attention to three routes to a profit:

- Improve efficiency
- More riders
- Outside revenue



The big "E" for efficiency got its greatest boost when the American Transit Assn. first issued results of its study on Transit Pars (Jan. '53, page 69).

PARS served as a challenge to all transit operators and today work is continuing on the full development of the divisional "yardsticks" by which separate departments are measured proportionately against the company as a whole to test its efficiency.

R. F. Randolph, executive vice president, Charleston (W. Va.) Transit Co., says the development of the latest departmental supporting yardsticks are "a significant milestone in measuring the efficiency of mechanical operations of bus companies.

"For the first time, with these yardsticks there now exists a series of measures to determine

whether or not the mechanical department of a transit bus company is operating with reasonable efficiency."

The approved maintenance yardsticks are:

1. For servicing labor—0.90 man hours per bus day.
2. For maintenance repair and overhaul operations—18.50 equivalent man hours per 1000 bus miles. Equivalent man hours are actual man hours of labor plus the cost of parts converted to man hours at this rate; \$5 parts costs equal one man hour.
3. For supervisory and clerical functions—2.65 man hours per 1000 bus miles.
4. For overall mechanical work—30 man hours per 1000 vehicle miles.
5. For spare buses required for mechanical department purposes—6.0 per cent.

The committee for a yardstick on the purchasing and stores division, headed by C. E. Peitsmeyer, has recommended tentative yardsticks for the P&S department as follows:

1. P&S administrative labor—50 man hours per year per bus owned.
2. Storeroom inventory per bus—\$325.
3. Annual storeroom turnover—2.50 (tentative).
4. Value of material disbursed per 1000 bus miles—\$19.50.

Another method, working closely with PARS, is full use of present facilities and construction of new shops, garages and offices when needed.

Consolidation of divisions is being tried by more and more transit fleets to increase per-worker efficiency. For instance, Indianapolis is incorporating two divisions at the larger building to reduce the number of non-operator workers.

National City Lines, in working toward fewer employees per bus, not only accomplished the suggested "goal" of 2.2, but had 2.05 in 1952, 1.99 in 1953, 1.82 in 1954 and leveled off at 1.81 in 1955.

New York's city-owned transit showed the first surplus this year since the Forties through a stepped up efficiency program (June, page 72). Replacement parts, supplies and materials outlay was

PROFITS

having to up fares

decreased \$1,183,457 by increased efficiency of maintenance employees. Engine life of diesels was doubled and automatic transmission life was tripled—all from better maintenance. About 100 hourly-rated employees were sent to school on overtime to learn advanced service techniques from bus manufacturer's specialists. (Jan. '56, page 70). Labor costs dropped \$1,612,132 when the labor force was cut from 9000 to 7500 in two years by not replacing employees who quit or retired if replacement was not considered necessary.



Passenger losses during the past few years have put increasing emphasis on the problem of attracting new riders. Better regular and charter service and improved equipment can do the job. You'll find further on in this article a section of practical ideas which the nation's fleet operators have been putting to use to attract riders.

In the matter of equipment, a whole new world of ideas has been bursting on the transit industry since Mack first introduced its famous dream bus (Oct. '56, page 130).

A surge toward air conditioned coaches (Jan., page 66) seems to be the order of the day to match family automobiles in comfort and convenience.

J. L. Haugh, president of Metropolitan Coach Lines, San Diego, Cal., tells CCJ "... Motor coach design has steadily improved, but not enough, unfortunately, to measure up to the artistic concepts of a modern age. Now the transit industry, assisted by the manufacturers, is moving ahead to meet the need."



Three particular methods of diversification are being tried at present by individual properties—vehicle leasing, maintenance on outside vehicles and "spectacular" advertising.

Going into the vehicle rental service most wholeheartedly is National City Lines, Inc. In the past year they have opened facilities in over 20 cities. They offer stake-type trucks, vans, three-quarter, half-ton delivery trucks and others for which there is a demand. Trucks may be rented hourly, daily or weekly, and fleet operators may rent extra units for peak periods or for meeting emergencies.

San Antonio Transit Co. purchased all of the capital stock of Motor Equipment Corp., a dealership and parts agency which sells and services Diamond T trucks. Often the rental system is in conjunction with an outside maintenance program, such as set up in San Antonio. Here's how they utilize their modern shop to bring in added revenue:

San Antonio sells preventive maintenance like it performs on their own vehicles. Among customers now are several truck lines and a school bus district. They have facilities for every type of work, including paint shops, body shops and general repair work. The shop layout was altered early in the program to take care of the extra work.

Charges for service is usually based on a \$4 per hour rate, after careful consultation with Chilton's "flat rate book." Parts are usually charged out at 10 to 18 per cent over cost, just enough to pay for going to get them. The company keeps in stock only about \$300 worth of parts for its outside work and few new tools had to be bought.

Baltimore Transit has recently gone into outside service in a big way. Through subsidiary corporations, the property is rendering complete maintenance for outside trucks, has its own truck leasing facility, even is getting in to truck and trailer body fabrication. It also offers service trucks for servicing scattered fleets.

Gus Heiber of Boston Worcester and New York St. Rwy Co. reports school bus service as a major source of his property's outside income.

St. Louis is also doing outside work. And at Galveston, Texas, Dick Bowen's Galveston Fleet Service, Inc., leased the shop facilities of Dick Bowen's Galveston Transit Co. to do all GTC service and maintenance as well as for Texas Bus Lines.

(TURN TO PAGE 164, PLEASE)



United has 10 oil-fired heaters. Each serves 12 buses, pumps 170 degree water through their blocks and systems. Heaters work only as needed. Light on pole warns if unit is off cycle

UNITED TRANSIT STORES 'EM

Oil-fired and electric heaters give low-cost results even in cold

▼ TODAY'S HIGH cost of building has all but eliminated the consideration of coach storage indoors, says United Transit Co., Providence, R. I. After considerable review of such costs, the company decided to set up outside storage facilities with heater installations to take care of all equipment that could not be stored indoors.

United has heaters for 173 coaches at three locations and reports favorably on both costs and operation. It is using both oil-fired units and electric pre-heater types.

Company policy recently has favored leasing of property at outlying city locations, namely Pawtucket and Woonsocket. On a relatively short term lease, United did not feel it was practical to install the underground lines necessary with the oil-fired heaters. Therefore, electric pre-heaters were found most satisfactory at these locations.

Thirty-two Teck heaters were installed at Pawtucket and 21 were set up at Woonsocket to take care of 53 coaches at these locations. This unit is made by Kim Hotstart, plugs into a 220-volt line and heats engine coolant so that it circulates through the engine.

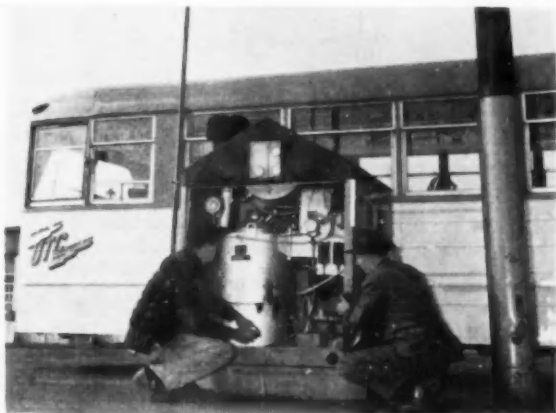
Advantages of the electric heater, according to United are: Simplicity of installa-

tion, lower cost of installation, and lower initial cost. However, it has been necessary to use anti-freeze in coach cooling systems in the buses using these facilities, whereas oil-fired units do not require it.

At headquarters in Providence, adjacent to the shop, the company went to oil-fired heaters developed by Vapor Heating Corp. Here they have installed 10 heaters to take care of 120 coaches. Since *COMMERCIAL CAR JOURNAL* readers are familiar with this type of heater, little installation detail will be discussed here.

The oil-fired heater system is equipped with underground lines with manholes placed at 11-ft intervals to provide for attaching hot water lines to the coach engines. Heater itself is located above ground in the center of the parking lot to provide for easy maneuvering of coaches in and out. The underground lines run out in both directions from the heater units.

Power lines to provide current to operate the electric system of the heater are above ground. On the other hand, the heaters are fed with fuel through underground oil lines originating at one common storage tank. Heater houses measure 42 x 48 in., are pleasing in appearance and offer little obstruction to flow of coaches through the lot.



Each heater has its own water tank and pump. Fuel is fed from common storage tank through underground line



Rows of outlets are arranged for convenient bus parking. Arrows point to manholes which have hoses for coaches

Water lines pass underground from heater to manhole outlets. One hose feeds hot water, other returns it

OUTSIDE

New England winters

Construction costs figure

around \$5500 per unit or \$458 per coach. This figure includes cost of heaters, lines, electric requirements and all labor. It also includes cost of paving the area, an item which possibly should not be charged against the heaters.

Operating costs of the oil-fired units run at 55½ cents per coach per day. This is figured over the 1955 season at Providence, which had a rather severe winter even as New England winters go. Temperatures are kept at 180 deg. Heaters are kept in operations the day round as fuel consumption during the no-load periods is low. Originally, when heaters were shut off entirely after the coach was disconnected, carbon and soot formation on the burners necessitated frequent maintenance.

Continual operation has

precluded much of this service requirement. Two men, however, do service all heaters on Thursdays and Fridays of each week. This takes only approximately 1½ man-days per week and is cheap insurance against failure at a critical time.

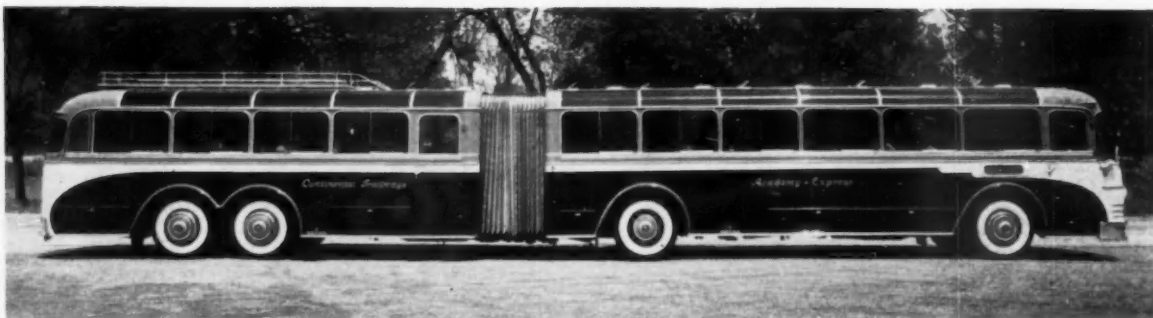
Any comparison of costs

between the electric and the oil-fired heaters is unrealistic, according to United. The electric heaters are ac-



tually costing \$1.22 per bus per day to operate. However variations in costs of electricity between cities might conceivably cut this cost by one half for other properties.

To offset this, however, the company points out that installation costs are less. Electric heaters were installed at Woonsocket, for example, at a cost of \$146 per coach. Thus, initial costs are appreciably less. The Vapor heaters are set up on a 15-year depreciation rate, while electric heaters have an anticipated life of 10 years. Service costs, too, are practically negligible with the electric type heaters.



The 60-ft German-built Academy Express maneuvers well despite its length. Swivel device permits a 40-ft inside turn

Trailways "5 Star" Routes

SHOW PROFITS with

LUXURY BUS SERVICE, complete with attractive hostesses, is paying dividends for Continental Trailways. Started as an experiment in January, 1956, company president M. E. Moore has termed the operation an "unqualified success, promising to afford a sharp increase over last year's net profit of \$544,446."

The service has grown from one route linking Los Angeles and San Francisco, Cal. to four additional existing routes. Plans for five more have been announced and still more routes are being considered.

5-Star Luxury Service

Known as the 5-Star Luxury Service, the plan features modern specially-equipped buses, express schedules, uniformed hostesses, free light refreshments on board, rest rooms, contour seats and various other services. Scheduled in addition to conventional service on the routes, the special accommodation is offered at a premium fare.

Originally the 5-Star routes were served by double-deck Vista Liners converted to luxury service by addition of rest rooms and other equipment. In September 1956 the first Golden Eagle, a \$43,000 German-made coach, was purchased on a trial basis. As a result of the success of the test, Continental has ordered 50 more of these 40-ft units. Half of them will be used for existing routes, with the others being used to expand the service.

One route, linking Pueblo, Cal., Fort Carson, Colorado Springs, the Air Force Academy and Denver, Colo., is served by two German-made articulated coaches. These units are known as "Academy Express"

models. First of their type to be used in this country, the 60-ft coaches are highly maneuverable despite their extreme length because of a turntable pivot in their center. Company officials are considering purchasing more of these units after successful operation and public acceptance of the prototypes have been established.

The Golden Eagle

The Golden Eagle is manufactured by Karl Kassbohrer Fahrzeugwerke, G.m.b.H., in Ulm, West Germany. It has a lightweight tubular steel integrated body and chassis, fluted golden-colored aluminum sides and lightweight aluminum wheels manufactured by the Aluminum Co. of America. It weighs 24,000 lb empty, 32,000 lb with a normal load.

Ducts for the 10-ton rated Carrier air conditioning equipment were fabricated for the pilot model Golden Eagle in Trailways' Dallas shop. Models now being shipped will have all duct work in place upon arrival.

Passengers ride high above the traffic, with baggage and express compartments under the floor.

The quiet operation of the engine, mounted under the nine-passenger observation lounge at the rear, is combined with thick insulation to shield passenger compartments from heat and noise.

"Whisper" Diesel Engine

Called the "Whisper" engine by its builders, the 280-hp M.A.N. V-8 turbocharged diesel is produced by Maschinenfabrik Augsburg-Nurnberg in Munich, West Germany. The customary roar and vibration of

German-made 60 ft coaches are designed for maximum passenger comfort, carry many "extras," including pretty hostesses

By Sam Keeper

LUXURY BUSES

the motor is muffled by detonation of the fuel and the exhaust-warmed air within the piston chambers instead of outside the piston head as in conventional engines.

The six-forward-speed transmission and electric gearshift were developed by Zahnradfabrik Co. of Friedrichshafen, West Germany. Gear ratio in the sixth or overdrive gear is approximately .66 to 1. An

The lightweight Golden Eagle is powered by a 280-hp V-8 diesel. Passengers ride high, but a hydraulic leveller overcomes sway. The 60-ft bus weighs 24,000 lb



Interior of Academy Express shows galley facilities. Floor turntable is part of swivel for rear section

engine speed of approximately 1600 rpm is required to produce a level road speed of 55 mph.

Smooth Ride

Three measures designed by the Goodrich Tire and Rubber Co. have been employed to increase passenger comfort. One is the Torsilastic spring system in which twisted rubber supports the weight of the bus and absorbs road shock from the wheels. Second is a new hydraulic "constant level" device which compensates for any incline when the bus is going around curves or over bumps. Developed by Dr. A. S. Krotz of Goodrich, it is supplemented by an extra heavy shock absorber system.

Ease of operation of the Golden Eagle has made it
(TURN TO PAGE 106, PLEASE)

Engine noise is cut off by insulation and design in the Golden Eagle. Engine is located under the observation lounge seen through door at rear of the bus



Mobile Maintenance

Boosts Shop Capacity

When space is limited you solve the problem with shops on wheels and wheels on your shop equipment

▼ TWO KINDS of mobile maintenance are featured at Louisiana Industries, Inc. Says Garage Superintendent Carl Ladner, "We have a small shop. It might hold five trucks if they were fitted-in with a shoe horn." So, to handle the work load of its 60-unit fleet, Louisiana has come-up with. . .

- Shops on trucks that take care of maintenance in the field.
- Shop equipment on wheels so that it can move to the truck rather than juggle trucks within the small area.

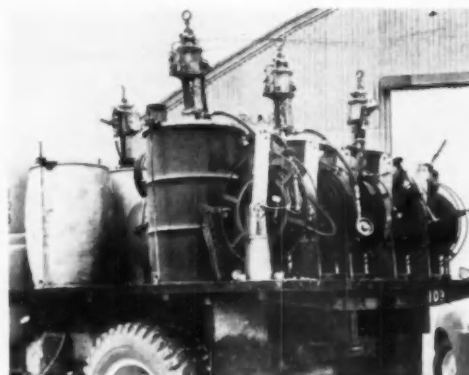
Here, for example, are six of the mobile units that boost Louisiana's shop capacity:

Five kinds of lubricant are dispensed from a truck that services stationary construction equipment as well as the fleet of ready mix trucks. Lube drums are secured to the truck platform by flatbars across the top of each drum. These are snugged down by J-bolts hooked into eyes on the platform.

Air-pressure heads are supported by passing through these flatbars. A compressor set in the midst of the drums supplies pressure to all. A pressure drop in any tank sets the idling compressor to pumping. Five hose reels line the back of the truck.

From the telephone company Louisiana Industries bought a used line repair truck. It was completely reconditioned, repainted in the company's standard bright orange. Then it was stocked with all tools and supplies needed for any repair work in the field, short of a major overhaul.

IN THE FIELD



Lube Truck



Tool Carrier

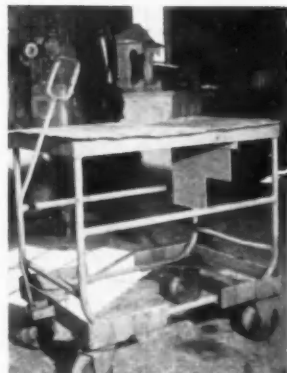


Welding Trailer

IN THE SHOP



Steam Cleaner



Parts Table



Meter Stand

The ladder is used to reach high spots on cranes, conveyors and shovels. It also is used occasionally for rigging, erecting temporary lines, or topping and trimming trees.

A portable welder is usually in tow behind the trouble truck. While it's some bother to have it always tagging along, the mechanic is more likely to get right to an unexpected welding job. He doesn't wait until the next time around or else make a special trip back again with the welding outfit.

A paint spraying machine has also been rigged up similar to the welding unit. It makes it easy to spruce up stationary equipment at odd times when they are idle. Such a job can often be done in part of a day in the field when it might take two or three days to get a unit in for painting and back out again.

The steam cleaner was made mobile by mounting a pair of 30-gal propane tanks with it on the dolly. A platform of sheet metal was welded over the fork of the dolly. The tanks are set into two hoops of strap iron welded onto this plate. Clamps at the top secure the rim of each tank to the body of the unit. The tanks are connected to the steamer's control valve through a domestic gas heater reducing valve.

With this mobile unit trucks never have to be moved for cleaning. A special cleaning bay is unnecessary. When the garage is full and a truck is being worked over out on the apron, the cleaning unit may be rolled right out to it.

The boys got tired of stooping over to repair transmissions, clutches, rear ends and small engines where they rested on low dollies or mobile jacks. So they made a mobile table that brought the parts up three feet off the floor.

They started with the dolly for a discarded portable welder. Framing is one-inch pipe. Top is two-inch angle iron of $\frac{1}{8}$ -in. stock, braced by crosspieces of angle iron. It is covered with $\frac{1}{8}$ -in. deckplate. Large castors, the front ones swiveled, enable even a concrete mixer engine to be wheeled around the shop with ease.

High curved truck fenders have never been safe places to set expensive meters and testing gages. Our head machanic added to the legs of a steel cabinet with lengths of angle iron. This brought the top of the cabinet level with the truck fenders. A meter on top of it is at eye level to a man working under the hood.

Besides preserving the meters, this makes them easier to read by removing them from vibration. A cushion is added by a thickness of corrugated cardboard taped to the cabinet top. Without the meter perched on a fender, the mechanic is more free to move around. All small test equipment is stored in the cabinet. It also contains an assortment of tools and small parts most likely to be needed in tune-up work.

When Winter Comes . . .

CLEAN THE COOLING SYSTEM

Then Put in Anti-Freeze

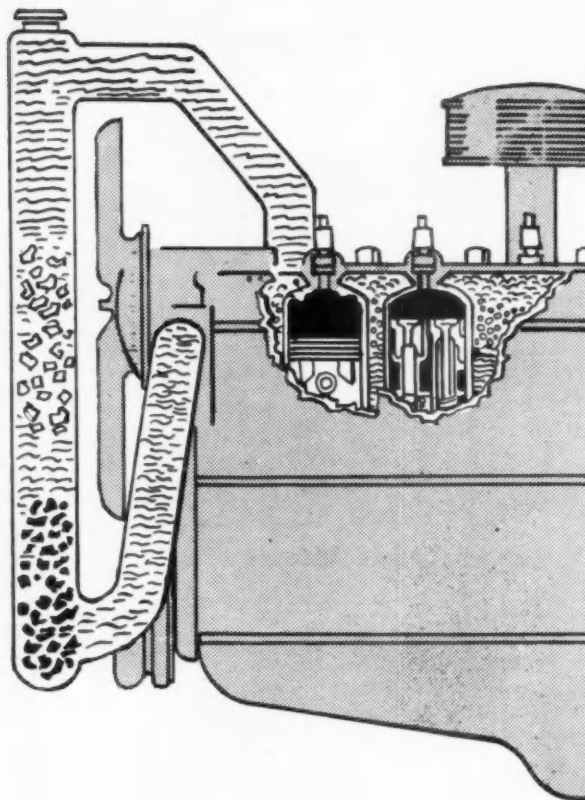
**"Hot" spots on engine can develop
from bad circulation even
when dashboard indicator shows
temperature is normal**

IN DECIDING on the need for cooling system maintenance, don't always rely on the dash heat indicator. Although it may be loafing comfortably over in "normal," certain spots in the engine might be critically overheated.

The temperature gage on the dash only registers temperature of the coolant. It does not report isolated engine "hot" spots where trouble may be developing. Very often several dollars worth of damage can be done—and much anti-freeze lost—because the gage said OK. The most sensible approach is to check and clean the entire cooling system before anti-freeze weather approaches.

While the best job of cleaning can be done by dismantling, the radiator and block can be cleaned to a certain extent with use of compressed air and prepared cleaning solutions. Flushing the system can be done by draining the complete cooling system. Caution: Do not drain the coolant from a hot engine immediately after it has stopped. Draining a hot engine may be the cause of future valve failure as the valves will tend to warp unless allowed to cool before the cooling system is drained.

In most cases it is advisable to remove the complete drain cock assembly in order to allow maximum drainage while flushing the engine water jacket. Also it is helpful to use compressed air to loosen up scale lodged around the block drain hole. This is done by inserting a blow gun into the drain cock opening and giving several spurts of air in order to loosen the semi-solid matter lodged at the base of the water jacket.



For most complete removal of loosened material, pressure flush the radiator and engine water jacket in the opposite direction of the coolant flow, and then flush in the normal direction.

With the radiator hoses disconnected and the radiator cap on tight, clamp the flushing gun on the lower hose, turn on the water and let it run until the radiator is full. Then apply air pressure gradually to avoid radiator damage. Repeat this operation until flushing stream runs out clean.

To flush the engine water jacket, remove the thermostat, clamp the flushing gun in the upper hose and partly close the water pump opening. Fill the engine jacket with water before applying the air. Follow the procedure for flushing the radiator. Alternately fill the water jacket with water and then blow it out with air until the flushing stream runs out clear.

Caution: Do not apply full air pressure to radiator or engine water jacket. Extreme air pressure can burst upper or lower radiator tanks. It is not too common but it is possible to unseat spring-loaded water pump seals on packless-type water pumps. If particles of rust are forced under the self-adjusting seal it will cause undue wear on the mating surfaces.

(TURN TO PAGE 160, PLEASE)



CONSTRUCTION FLEET MAINTENANCE



Compiled by the Editors of COMMERCIAL CAR JOURNAL

At Your Service—

It's a long way from the glamour of the new highway cuttin' through the pass—to the maintenance shop. If there's romance in construction, "it sure isn't back here," says a master mechanic on the east coast.

Al was under a crawler tryin' to find the cause of the oil leak when we talked to him. He grunted something unpublishable about PM—but he's got a system of checks and fixes all the same. Al may not admit it, but he's got a pretty good PM program going—and in spite of all the heartaches (and backaches) in the maintenance department, another year or so will produce the pay-off.

It sure doesn't seem productive sometimes, when you're in there wrestling with a man-killing track. You wonder whether the top brass really appreciate your work. But you know that mountains can't be moved, nor river courses changed without the horsepower that you rebuild back into those hungry earthmovers. So don't sell yourself short. The mechanic is pretty darned important after all. . . .

While visiting a shop in

Philadelphia the other day, the master mechanic gave us something to harp about. He admitted that his company was "cable-careless." Said the cost of new cables would pay his salary—all because they were not handled properly. Need more be said?

We've got plenty of helpful hints on cable care. But we feel that any construction shop mechanic knows all about it. It's just a matter of setting up a routine to check, lubricate, wind up right, and keep out of the weather when possible. . . . Are *your* cables wearing out too fast?

How much does a breakdown

on the job cost you? Ever figure it down to time loss on all the equipment depending upon a single crane or earthmover? Sit down some time and figure it all up—then tell your mechanics how important they are. They're just about next to airplane mechanics in holding responsibility, and they ought to realize that when they set the injectors—or fit rings.

Dirt is your biggest

enemy—causes you more work and more headaches than any single factor. It's especially troublesome in off-highway equipment, where conditions are generally pretty rough. Cummins Engine people spend a lot of money showing the effects of dirt in engine wear. An important part of their training course covers means of eliminating contamination—both from outside and from inside the engine. Watch your mechanics to see that overhaul areas are clean, that tools are clean, that parts are stored properly and protected until used. Watch your lube men to see that they get only oil into the gearboxes. It's always tempting to rush during fuel or crankcase filling—and a lot of dirt is "put in" right on the job. Watch your lube oil storage facilities to see that contamination is eliminated. And finally, insist upon periodic changing of air cleaners and oil filter socks. It'll pay big dividends. . . .

Seems like none of us read

very much these days. Factory service people tell us they wish mechanics would read (and heed) some of the literature on service they send out. One manufacturer (whose name we would never mention) even went so far as to suggest that contractors give their mechanics an hour a day to pour over material sent them on factory changes, modifications, new adjustment data and information about new models. Well, that's pretty far-fetched. But the point is well taken. It's just impossible to keep up with the times without reading these important service bulletins.

Time was when this sort of reading was pretty uninteresting. But Caterpillar is doing a bang-up job in making service reading worth the time. As you know, they set some of it up in "cartoon" style. Get the points across with as little preaching as necessary.

Incidentally, are you getting

all the information on maintenance you can use? If not, tell us what you want, and we'll try to beat blazes to get it for you—or send you to the proper guy at the factory.



Seal Installation

By J. B. SINCLAIR, Service Dept.,
Caterpillar Tractor Co.

VERY FREQUENTLY, the parts doing a big job are small in size—such as seals—and, therefore, are seemingly insignificant. When compared to the size and cost of a crankshaft, the size and cost of the seal at the forward end of the crankshaft is negligible. Yet, that small seal, if not installed correctly or replaced shortly after a leak occurs, can permit serious damage to the engine.

A felt seal is ordinarily used where the principal requirement of the seal is preventing the entry of dust and the retention of oil or grease is not a requirement. When installing a felt seal, impregnate the seal with lubricating oil to protect the seal from overheating and wear. If the installation requires that the seal be split, the cut should be made at an angle.

Leather and rubber are widely used sealing materials. The most common usage is in lip-type seals. However, leather is being replaced by synthetic rubber in many of its applications. The rubber lip seal in most applications provides better sealing at high speeds, high temperature and where misalignment and run-out conditions exist. Rubber lip-type seals are also effective dirt seals. There are definite reasons why rubber seals have not replaced leather seals in all applications. Therefore, it is sug-

gested that unless a rubber seal is recommended, the original leather lip seal should be used.

When possible, prior to installing a leather lip seal, soak the seal in warm oil for about a half hour. A rubber lip seal should just be dipped in oil. Install the seal with the wiping edge turned in the direction recommended. For single lip seals, leather or rubber, it is a general rule that the lip of the seal points toward the material to be sealed. That is, if the primary function of the seal is to exclude dirt from a compartment, the lip of the seal should be pointed toward the outside. If the primary function is to seal lubricant in a compartment, the lip of the seal should point toward the compartment containing lubricant.

A double lip seal,

whether leather or rubber, frequently has one lip which is wider than the other lip. In applications requiring such a double lip seal, the spring side of the seal, which has the wider lip, should always point toward the lubricant to be sealed. If two compartments containing lubricant are separated by a double lip seal, the wider lip should point toward the compartment containing the higher pressure or the compartment with the most fluid lubricant.

There are several ways to install lip-type seals. If the seal to be installed must pass over a sharp shoulder, keyway or spline, shim stock should be wrapped over these areas and the shim stock lubricated to provide a

Machines Come to Mohamed—Mohamed Construction Co., that is, working on the Black Canyon Grand Ave. interchange just west of Phoenix, Ariz. Lubrication and servicing are done after the job is shut down for the night. Service truck travels down the line readying equipment for the next day's work. It's equipped with floodlights, emergency lights as well as radio to check with the office in case the lube man can't find a piece of equipment on this widely scattered job site.

smooth, sliding surface for the seal lip. If shim stock is not available, a heavy paper coated with grease will work satisfactorily. To drive the seal in place, use a driving member that will press against the outside rim of the seal.

Compressor Maintenance

By PAUL AZZOLINA, Manager, Service Dept., LeROI Division, Westinghouse Air Brake Co.

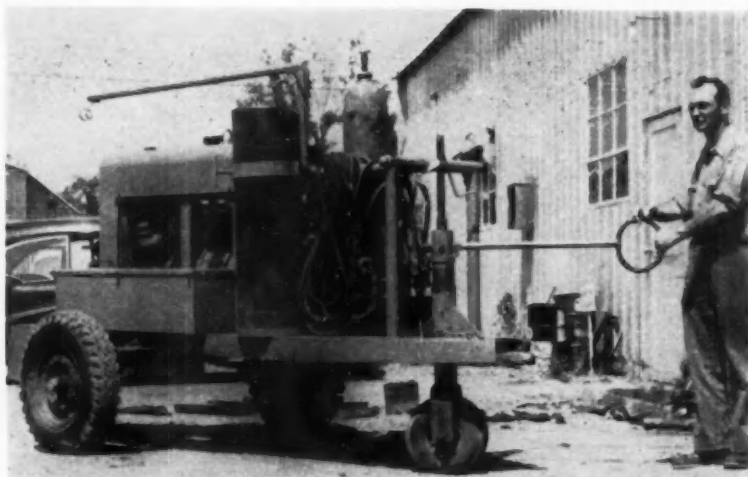
REGULAR maintenance will assure dependable and efficient operation of your air compressor.

Keep your compressor clean. Dust and oil accumulated on the cylinders and intercooler will reduce the rate of heat dissipation. This raises the temperature of the compressed air unduly. The air cleaner should be clean since, if this is not done, dirt will get into the compressor cylinders through the air cleaner. Air cleaner oil should be changed every four hours under extremely dusty conditions.

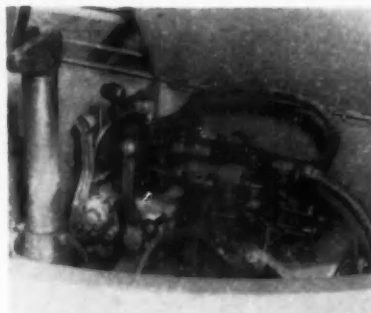
Proper lubrication is equally important. Check the crankcase and air cleaner oil levels daily. In both cases, use SAE 10 in winter and SAE 20 in summer. Clutch throwout fittings should be checked weekly for proper lubrication. Wheel bearings should be removed twice a year and washed with a solvent. They should be repacked with a long fibre wheel bearing grease.

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Power for the self-propelled unit at left comes from a hydraulic pump powered by welder's engine. Ring held by operator both steers and controls the speed. Below is engine compartment showing a 2-cyl Onan air-cooled engine and two hydraulic control levers



Air Compressors and Welders Can Be Self-Propelled

Fleet-built "Walk Wagons" save wait for truck

WAITING TIME for a tractor or a truck to tow stationary units mounted on rubber-tired trailers has been eliminated on jobs of Tetyak-Young Construction Co., Kansas City, Kan. Investment in an extra truck and wages of a driver for such units is a thing of the past.

Solution to the problem of moving air compressors, welding rigs and similar equipment on construction jobs, has been developed by John Tetyak, co-owner of the company. It consists of a 3-wheeled vehicle, which the inventor calls the "Walk Wagon."

No extra engine is needed. A hydraulic pump, belt driven from the engine that drives the compressor or welder, furnishes hydraulic pressure for driving the machine at speeds of 5 to 8 mph. When required the speed can be stepped up some by pinning the governor in a higher speed bracket.

The unique one-handle control and automatic safety is the heart of the unit and the feature that makes it easy to use. Anyone can operate the control with a single lesson and it is virtually impossible to sustain an injury while leading it because of the automatic shut-off and brake lock.

Steering handle is used to guide and control speed the vehicle. Steering is accomplished by swinging handle in desired direction which turns the single twin-wheeled front pivot. The steering handle has a large ring in the leading end and rotating the handle anti-clockwise starts self-propelling mechanism. There is nothing to turn on and nothing to shut off. Operator merely picks up handle, turns it to left and the unit will follow him wherever he wants to go—even in difficult places where a truck or a mountain goat cannot go.

If he lets go of the handle it returns to its stop in a clockwise direction which stops the propelling motion and locks the automatic wheel brakes.

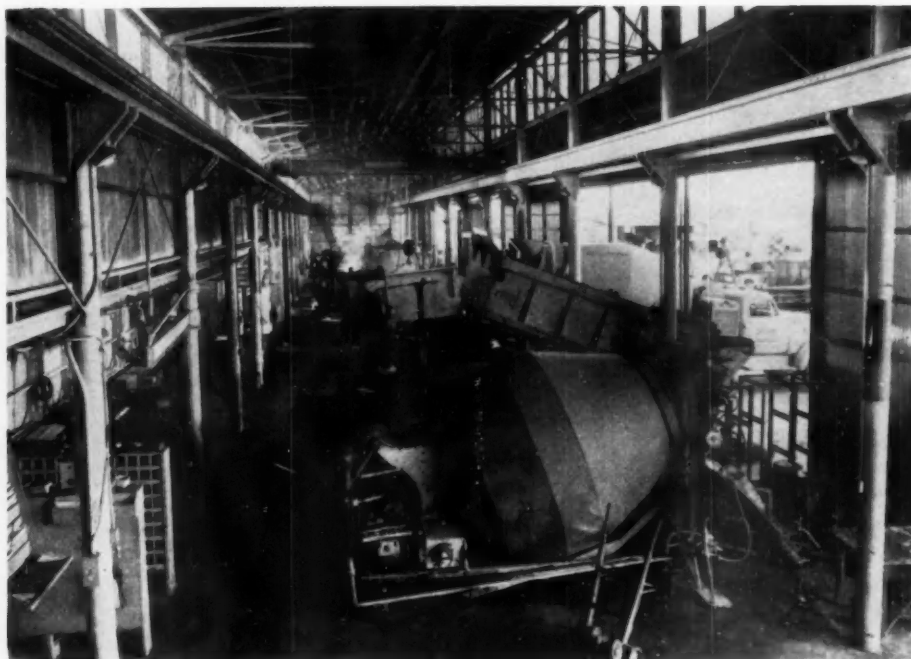
After a year's field testing under actual construction contract conditions, the Walk Wagon has made a name for itself. Savings which result from its use can be almost fantastic. The ease with which self-powered units can be led to work positions makes it popular.

New Heil Dump Body



Here is a new Heil HMT-11 light-weight dump body specifically designed for use with Heil's HMT 63-102 or HMT 63-117 head-mount telescopic hoist. The underbody has interlaced cross-members. This results in a body floor welded both to the top of the cross member and to the long channel. As a result, distortion and floor sag are said to be virtually eliminated.

Fisher handles a wide variety of equipment in its operation, as evidenced in this general view of the shops



At Fisher Contracting . . .

PM and Specialists Pay Off

REGULAR INSPECTION and maintenance and a crew of specialists with the happy knack of developing bright ideas into useful equipment are helping Fisher Contracting Co., Phoenix, Ariz., keep its fleet in top shape.

To handle the firm's varied activities, there are 233 pieces of mobile equipment, including 81 heavy-duty construction units.

To carry on its far-flung activities, Fisher operates through three major divisions: (1) Superior Sand & Gravel, (2) Domestic Construction and (3) Foreign Construction. Currently, its foreign branch is engaged in Inter-American Highway construction in Guatemala.

With Superior's 152 vehicles servicing a 50-mile radius, Fisher's base shop finds itself working on a 2-shift schedule under the supervision of Jack Moylan, equipment manager.

Routine Service

Fisher's policy calls for separate departments for each phase of its maintenance program. Each department has its own crew of specialists.

By Morris Rosen

Departmentalization begins with the service department, headed by Foreman D. M. Peterson. He receives regular reports from Sand & Gravel about the number of hours of operation by the 27 dump trucks, 30 mixer trucks, 43 pickups, 14 flat racks, 7 miscellaneous trucks, 3 tractors and semis, and 28 passenger cars. He personally keeps the record file current in the equipment office.

Lubrication is routine at 45 hr or 800 miles, with oil and air cleaners checked at the same time. Depending on the condition of the oil, changes are made every 2000-5000 miles. The "blotter" test helps keep tabs on how the oil is standing up. A drop of crankcase oil from the stick is applied to the blotter, or qualitative filter disk.

Tires are checked weekly wherever the equipment happens to be—in the yard or on the job site. Drivers are responsible for checking cars and pickups and for keeping tires at recommended pressures. In addition, drivers are expected to check by "bumping." The service department generally checks about 80 trucks per week.

Every evening Peterson gets a list of vehicles that

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Above. Rails and idler on tractor are checked before it goes to job. Reading from top, photos at right show . . .

A Fisher rebuilding specialist works on a diesel engine mounted on one of the company's versatile engine stands

Maintenance man checks over one of Fisher's four-wheel drive service trucks before it is allowed to pull out

This fully-automatic welder for building-up rollers was converted from a semi-automatic machine at the base shop

Well-equipped shop saves farming out and waiting for repairs. Machinist is turning shaft from vibrating screen

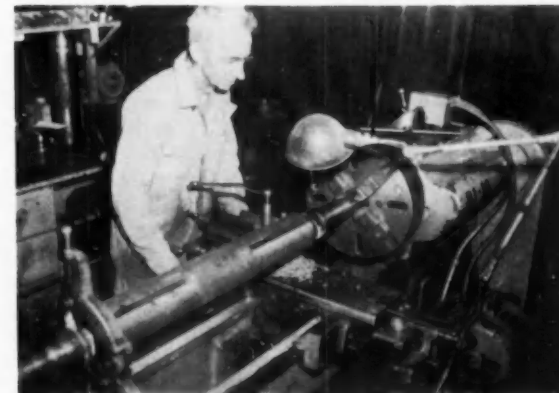
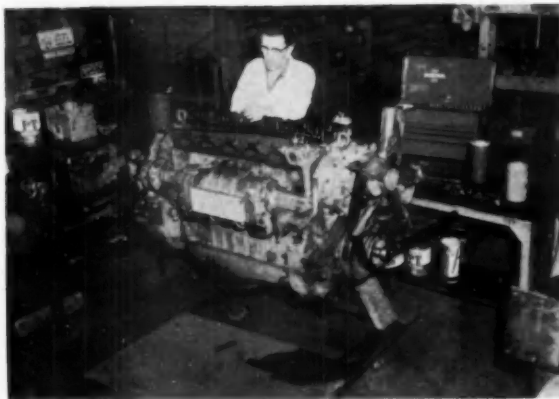
need washing from the Sand & Gravel dispatcher-foreman. These he tries to work into his schedule, on either day or night shifts. Steam cleaning is done as a regular PM service and upon shop request in connection with repairs—on engines, differentials, and transmissions. Pickups are washed on Saturday mornings only, except upon special request.

Wheel bearings are checked and repacked regularly every 15,000-20,000 miles. Checked at the same time are the king pins, steering, spring shackles, brakes, and bushings. Vehicles are also inspected for slack to see if they can continue without adjustment. Line tractors and trailers, used mostly on paved surfaces, come in at 15,000-20,000 miles.

Shop Departments

The repair shop reveals the extent to which departmentalization has gone. In the 38 by 100 ft section reserved for truck repair, there are specialists in transmission and differential rebuilding, engine rebuilding, ignition and carburetor repairs, and tune-ups. There are also separate areas for paint shop, machine shop, electrical repair diesel injection, engine

(TURN TO NEXT PAGE, PLEASE)





Diesel injection and ignition repair foreman at Phoenix, Ariz., shop checks out injector in dust-free test room



Ignition repair specialist checks voltage regulator in base shop room equipped with built-in test panel board

testing under load, etc., mostly operating on 8-hr day shifts.

Shop foreman Ben Maynard supervises the truck maintenance and repair day shift. His 3800 sq ft area has seven bays of which two are "dead." Thus, only five trucks can be parked simultaneously in the stalls for routing of equipment to proper departments. All are under roof with doors. Two overhead cranes (Blaw-Knox; P&H) do all the heavy lifting.

Equipment coming in from the field usually carries a list of repairs needed. This doesn't mean that field shops couldn't handle the jobs. Generally it means that a construction job is completed. Most major overhauls and repairs, however, are sent in to the base shop.

Equipment Manager Moylan does not believe in "farming out" repairs to downtown shops. He believes in having proper tools and equipment available for removal and installation of parts. Therefore, he has such items as 12 air wrenches ($\frac{1}{2}$ to 1 in. drive) to speed up jobs. Also, he has a transmission jack, two floor jacks, two wheel-dolly jacks, and six arc-welders, as well as a lathe, drill press, brake drum lathe, boring bar, line reaming bar, etc. In addition, he keeps a \$1000 inventory of small parts on hand, a \$75,000 general parts and supplies stock, and a supply of re-built units.

Transmissions and differentials are removed to a nearby stall where work is done. Engine re-

building is accomplished in the engine repair section. Fuel injection equipment is serviced in a separate 10 x 12-ft dust-free room. Brake drums needing turning are taken to the machine shop for lathe work.

Each repair job is assigned a shop order. The shop foreman issues orders for each piece of equipment, showing repairs needed. The mechanic assigned to the job charges time and parts used to the shop order number. Thus, the shop order serves as a record of repairs, parts, and labor involved.

Heavy Duty Service

Fisher has a separate program for its heavy-duty equipment. Service headquarters is a 38 x 126-ft section at the base shop. Lowell Howard is general shop foreman.

"Must" procedures include tightening sprocket bearings, and checking valves, bottom rollers, alignment of tracks, brake adjustments, steering clutches, etc. Also, linings are inspected periodically so that drums are not scored. Cross shaft bearings are checked for looseness and rear pinion bearings in the transmission for excessive wear as part of regular PM.

The maintenance program calls for checking all tractors for such symptoms as wear on the bottom rollers and in the roller bushings. Use of a gage on the front idlers to determine wear on rollers, sprockets, rails, grouser shoes, etc., is both quick and handy. With every tractor job, Fisher me-

chanics are on the lookout for more efficient work and time-saving techniques.

Automatic Welder

For example, to save both time and money, Fisher decided to build up its own rollers. During slack periods in 1956 one of its mechanics rigged up the positioner shown on page C5, which makes a semi-automatic Lincoln welding unit fully automatic.

Costing about \$800 for scrap materials and motors and about 120 hours in working time, the positioner works efficiently in building up rollers and front idlers. It also can be used to fabricate heavy steel and build up crusher rollers.

Another improvisation was an engine stand for making engines easier to work on and more accessible. The stand, shown on page C5, gets the engine off the floor so that it can be bolted down. Various adapters devised by Howard and his crew are for engines of different makes.

Still another "must" in heavy duty PM is the checking of powered graders. Mechanics make all necessary adjustments for keeping the grader tight enough for most efficient operation. For air compressors, they run orifice tests to see how efficiently they function and to determine whether they are putting out air at the rated capacity.

The firm has four shovels, 28 tractors (crawler or heavy wheel), 5 scrapers (Euclid), 15 haulers, 6 cranes, 6 motor graders.

What's New...

New life for old machines

is the subject of a new booklet, "Repowering Made Easy," recently released by Caterpillar Tractor Co., Peoria, Ill. Many old machine thought to be at life's end because power is down can be made productive again by repowering with a specially designed engine package, according to the booklet. The booklet describes through illustrations and successful installations how Caterpillar diesel engines help raise production on old machines. Also listed are some of the optional equipment and factory service available for repowering. Request Form No. D 723.

Lubrication guide service

for contractors from Pure Oil Co. takes the form of a unique "Simplified Lubrication Guide" booklet which generally lists the parts or units to be lubricated on engines and contractors' equipment. Simplicity of inventory is stressed by indicating that 95 per cent



Allis-Chalmers is expanding its line of motor scrapers with the new hydraulic 7-cu yd struck, 9.5-cu yd heaped, 12-ton payload, Model No. TS-160. It has an Allis-Chalmers 6-cyl, 516-cu in. disp., supercharged diesel engine rated 155 hp at 2200 rpm.

MacDonald, Young and Nelson, San Francisco, Calif., used to build their own portable offices and tool sheds at a cost of \$500 to \$800 each, but experience demonstrated these structures, though well built, would not hold up beyond three or four jobs. The stresses of being jacked



Nerve center for this mechanized service station is a receiver-mounted Ingersoll-Rand 36-cfm compressor. This unit, which has a 200 psi pressure rating, supplies the air that activates the entire lubrication system. It is mounted in a small space in the front left corner of the truck, and is operated by a Timken full torque power take-off driven through a special transfer case by the truck engine.

of contractors' equipment can be lubricated with only four lubricants.

The second phase of the program is specific lubrication recommendation charts covering the recommendations of over 100 manufacturers of the equipment used by contractors. Each chart indicates the various models, lubrication intervals and hours, and product recommendation. These charts and the booklet can be requested from Pure Oil Co., 35 East Wacker Drive, Chicago 1, Ill.

"Keep Them There"

is a booklet explaining how to keep earth-moving equipment on the job by proper dealer service. It comes from Caterpillar Tractor Co., Peoria, Ill. Pointing out that the dealership has available the trained personnel and necessary equipment to handle any service or repair operating properly, the new booklet shows how the machine owner can save money by relying on the dealer to spot and correct difficulties which would cause later trouble.

up and moved from job to job soon loosened joints to the extent that the portable buildings became useless. This contractor now has converted 15 reefer trailer boxes which are used on jobs in California and Nevada. They figure the cost of these units at under \$500 apiece.



FACTORY SERVICE

International Harvester points out some of the appearance characteristics of cerametallic clutch facings so that mechanics can determine condition during inspection. This type lining thrives on heat, they say, and a blue-black glaze on the surface is an indication that the facing is wearing properly. The cerametallic clutch has a tendency to produce "phonographic" type grooving on mating plates. But this can occur in a few hours. If grooves are present, this does not mean that parts should be replaced.

The cerametallic clutch will normally have the following characteristics:

- Concentric grooving of mating surfaces.
- Glazing to a deep blue-black color.
- Deepest grooves occurring at OD and ID of driven member sweep.
- Buttons may become egg-shaped.

On GM 6-110 engines, excessive leaking or failure of the ring-type rear crankshaft oil seal assembly now used may be due to incorrect clearance between the rear carrier of the oil seal assembly and the flywheel or flex-disc hub. The correct clearance must be maintained between these two surfaces to provide an effective oil seal and to eliminate wear on the crankshaft. This clearance is established by inserting shims between the rear oil seal carrier and the flywheel, or by machining the crankshaft side of the flywheel as necessary.

The recommended clearance to be maintained between the crankshaft oil seal assembly and the flywheel or flex-disc hub is specified on page 11 of the supplement to the Euclid 6-110 Engine Maintenance Manual (MM-1054). This manual also illustrates the method for checking this tolerance and the number of shims needed to establish the correct clearance.

Purolator tips off mechanics on methods of getting better oil filter efficiency. The service life of any filter depends to a large extent on its location, they say. Naturally the cleanest and driest location available should be selected—consistent with proper engineering. Long, tortuous connections, particularly from cleaner to engine, are not desirable. A stack or "snorkel" from the filter air intake to a source of clean, dry air is the answer.

Avoid exhaust soot. Exhaust gas contains oil and soot that builds up rapidly on dry filter elements. Therefore, the air intake of the filter should be kept away from them. Keep connections simple. Avoid "Rube Goldberg" plumbing! Sharp bends impede air flow. Guard against hose collapse on the suction side of any filter.

Keep it dry. Rain or road splash can make mud out of the dirt already trapped in a filter element.

Choose a location that minimizes the possibility of water getting to the element. Avoid dirt streams. Never have an air intake in a position where dirt or road splash is concentrated as it will materially shorten the service life of the element.

Caterpillar Tractor Co. has introduced a program of power certification, designed to provide the Caterpillar engine owner with certified proof of his engine's horsepower capabilities. The program, termed "Certified Power for CAT Diesel Engines," is the first such action ever taken by a diesel engine manufacturer. It consists of the issuance of a notarized power certificate to purchasers of Caterpillar industrial or marine engine arrangements, attesting that the engine is capable of the full capacity of its horsepower rating.

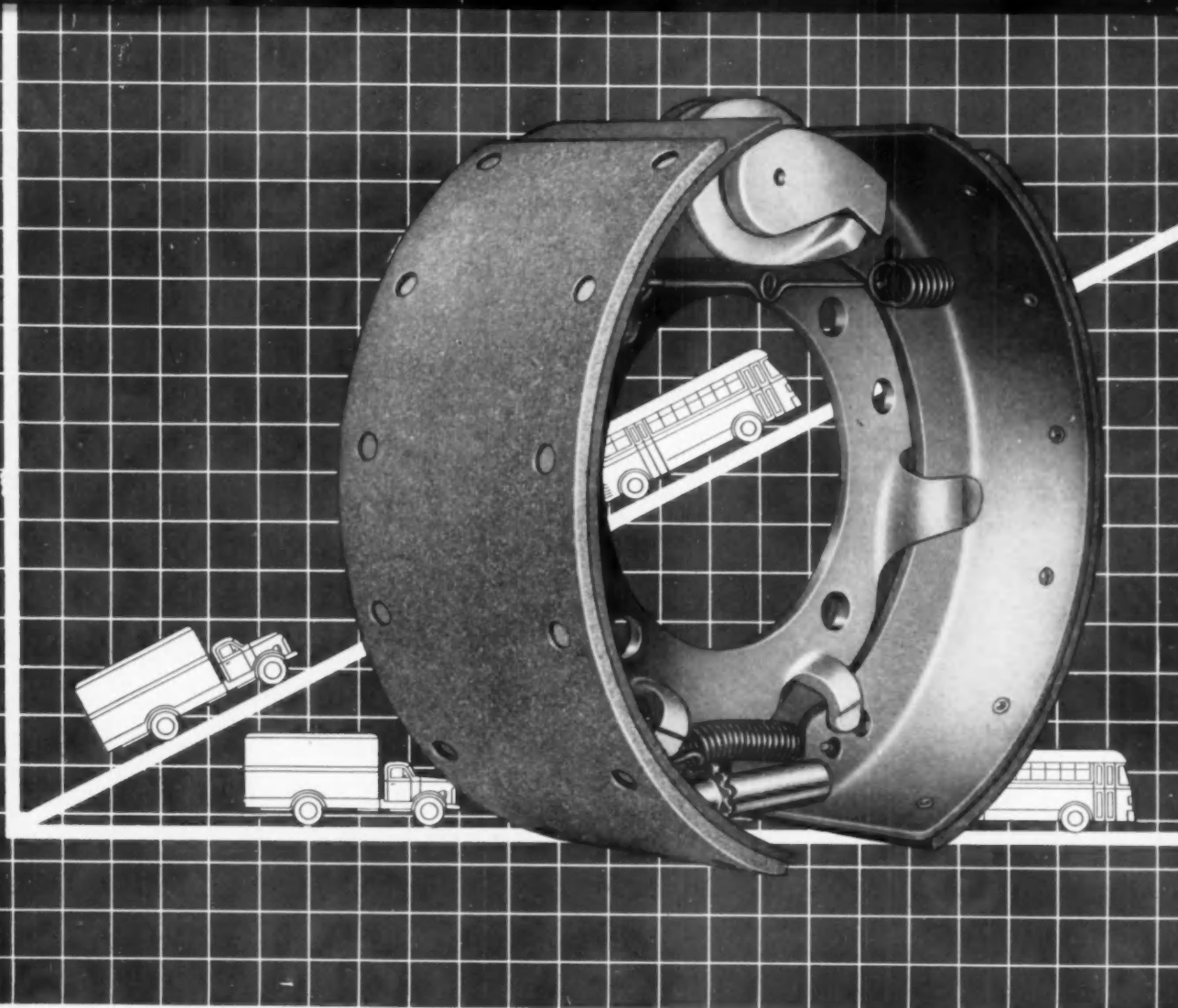
The "Engine Power Certification," which will be issued by Caterpillar at the time of engine delivery, will contain a certification of "Maximum Output Capacity," signed by the company, and notarized. In addition, the document will record the engine model and arrangement, the engine serial number, and shipping date. The engine's power and speed setting is also listed, along with the engine's individual power rating, either intermittent, rated or continuous.

International Harvester warns shop men about the use of chassis lubricant for lubricating wheel bearings in the drive wheels of Payscrapers and Paywagons. Temperatures climb to a point where this type of lubricant will melt and run out of the housing to cause bearing failure. The lubricant may also get into the brake lining. IHC recommends the use of a short fiber wheel bearing grease of a high melting point. Wheel bearings should be lubricated every 600 hours.



INDEX TO OTHER ARTICLES

- How many mechanics do you need to handle how many trucks? Here's one way of figuring it.....page 69
- Small shops can boost capacity by taking service to the equipment, in the field or in the shop.....page 82
- Need for cooling system maintenance can't always be determined by the temperature gage.....page 84
- For more cost saving ideas, see general index....page 2 and New Product descriptions beginning on...page 194



BENDIX DUO-DUTY AUXILIARY BRAKE

Power to hold on grades . . . Power to stop at road speeds

The Bendix* Duo-Duty auxiliary brake serves the double purpose of a positive parking brake and an emergency road-speed brake.

FOR PARKING, the Duo-Duty brake has ample torque capacity to keep the braked wheels from rolling on any hill or ramp, regardless of how steep.

FOR EMERGENCIES, it has the torque and thermal capacity to serve as a dependable stand-by brake

at road speeds should the main braking system, for any reason, fail to work.

Minimum physical pull at the hand lever, less weight, fewer parts, mechanically simple.

A heavy-duty drive shaft brake that is rugged and right . . . built and backed by Bendix.

*REG. U.S. PAT. OFF.

**BRAKES • POWER STEERING • POWER BRAKING • CONSTANT VELOCITY
UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS**

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Rural

PU & D

Radio Systems Speed

Herrin makes big savings in time, money and nerves with radio-equipped



When a pickup order is called in to Herrin Transportation's general office in Houston, the switchboard operator relays the shipper's address and instructions to the dispatcher's desk at the freight terminal some seven miles away by using the company's Tel-Autograph machine

WE ARE NOW using two mobile radio systems to improve service to our customers and reduce our operating costs. One is for our over-the-road units, the other for our metropolitan pick-up and delivery service.

While we lack exact figures, we know that the radio systems have helped us give our customers better service, and we estimate that radio saves us about 50 cents per truck per hour on PU&D.

Long-Range Service

More than 40 of our long-haul trucks operating

between Houston, Texas, and New Orleans, La., use the new Motorola "Private Line" mobile radiophone system. Motorola describes this system as one "which opens the mobile receiver speaker only for calls from transmitters in the system."

When we first considered two-way radio for our territory, we were aware of noticeable "co-channel" interference wherever several truck companies in the same area operate radios on the same channel. Usually, communications would be perfectly good through such interference. Sometimes, though, extraneous radio "traffic" from other truckers would

Customer Service

chain of trucks and terminals

By Robert T. Herrin, President
Herrin Transportation Co.
Houston, Texas



Modern dispatcher's quarters at Herrin's Houston terminal was designed to provide the greatest efficiency for the two-way radio control of all freight operations



Pick-up and delivery problems can quickly find their answer in a radio call back to the dispatcher's office. When the shipper's dock is tied up, for instance, the driver can request another assignment to save minutes, often hours, of useless waiting time

become objectionable. We felt that in such cases radio would become irritating—actually fatiguing—to our drivers.

Now, as our rigs travel along the road, they can pass through areas where radio traffic is heavy and the drivers are never bothered. The cab-mounted sets "open-up" only for our own signal, otherwise the loudspeakers remain quiet. Even interference from distant stations, the erratic "skip" type of reception brought about by excessive sunspot activity, is eliminated.

To assure continuous contact all along the route,

relay stations are located at our offices in Houston and Beaumont, Texas; Lake Charles, Lafayette, Opelousas, Abbeville, New Iberia and Baton Rouge, La. Our frequency for these stations is 44.30 mc.

While our "over-the-road" operations are separate from our "city" radio systems, the benefits we gain are largely the same. Working side by side, each system helps us to get full benefit from mobile radio dispatching: Greater efficiency on "same day" pick-ups; faster service on "rush" orders; improved training of new drivers; faster road maintenance of trucks; greatly reduced operating costs and improved overall effectiveness by giving dispatchers complete control over truck movements.

Radio Speeds Pick-up

In the city, the excellent dispatching control that we now get by instantaneous radio communication
(TURN TO PAGE 119, PLEASE)

Detroit Diesel Offers 4 Engines

New 71 "T" and 71 "E" series diesels are offered in 4 and 6-cyl models for trucks and buses from 26,000 lb GVW up

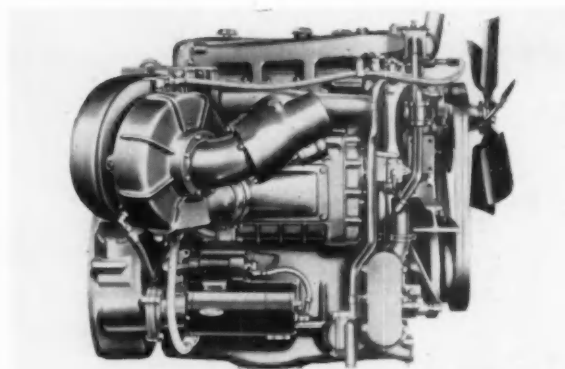
TRUCK AND BUS makers are being offered a series of four diesel engines for installation as original equipment by General Motors' Detroit Diesel Engine Division. The new 71-T and 71-E series engines come in 4- and 6-cyl models, will power trucks and busses ranging from 26,000 lb GVW to 60,000 lb GCW and up.

The "E" series has four exhaust valves per cylinder, instead of the conventional two, to insure expelling of exhaust gases. Its fuel injectors have a newly designed spray tip said to more completely atomize the fuel for more efficient combustion and reduced fuel consumption.

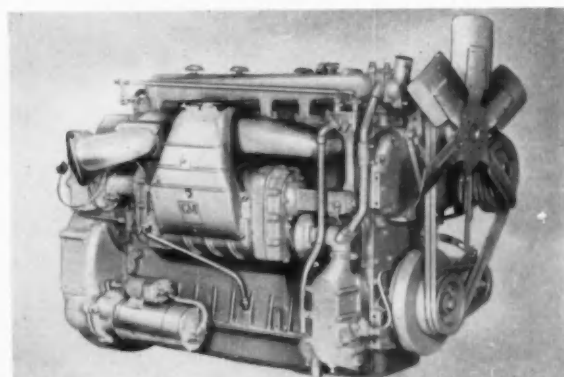
An increase of 38 per cent in the cylinder liners' air inlet area has been made for cooler piston operation and longer engine life. Its "fire ring," a newly designed top compression ring, is also said to add to piston life and engine power. A new high-capacity, low-speed blower is also featured for greater engine efficiency.

The 71-T series includes a turbocharger operated by the engine's exhaust gases to increase net horsepower without additional fuel consumption. Trucks testing this engine in the 6-cyl model have increased fuel mileage by as much as 15 per cent. The 4-cyl 71-T has a rated horsepower of 171 at 2300 rpm, and the 6-cyl is rated 236 at 2100 rpm.

The 4-cyl 71-E has a basic bhp rating of 140 hp at 2100 rpm; the 6-cyl is rated at 210 hp at 2100 rpm. The engines are rated at 1500 ft elevation, at 90° F.

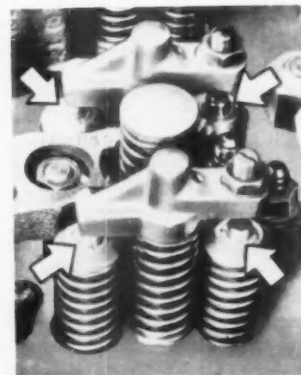


Four-cyl (shown above) and 6-cyl series 71 "T" engines are equipped with turbochargers operated by exhaust gases which are designed to boost net hp without added fuel



The 6-cyl 71 "E" diesel engine, pictured above, has a hp rating of 210 at 210 rpm. The "E" series has four exhaust valves per cylinder rather than the usual two

Four exhaust valves to hasten complete scavenging of used gases is one of the features of GM Detroit Diesel's new series 71 "E" engines



Detroit Diesel Engine Specifications

Engine Model No.	Cyl	D'sp. (cu. in.)	Bore & Stroke (in.)	Turbo-charged	Rated Hp (at rpm)	Maximum Torque (lb ft@rpm)	Weight with Standard Equipment (lb)
4-71-T	4	283.7	4 1/4 x 5	yes	171@2300	411@1600	1670
4-71-E	4	283.7	4 1/4 x 5	no	140@2100	385@1200	1550
6-71-T	6	425.6	4 1/4 x 5	yes	236@2100	630@1400-1600	2130
6-71-E	6	425.6	4 1/4 x 5	no	210@2100	577@1200	2010



18 Smith's terminals talk every day on telephone "family hour"

Each day at 1 p.m. the OS&D Manager of Smith's Transfer Corporation of Staunton, Va. is linked with each of 18 terminals in 6 states over Bell System private line telephone. *Since all 18 terminals are grouped together for open discussion, it is referred to as the "family hour."*

Then, starting at 3 p.m., the chief dispatcher calls for a truck "line-up" from every terminal. In just 30 minutes he gets unit availability for the next day.

At other times, Smith's terminals from Newark, N. J. to Charlotte, N. C. are calling headquarters in Verona, Va. with questions on rates and billing.

OS&D, dispatching, rates and billing—all can work more closely and efficiently because of good, direct communications *at an average cost of less than 21¢ per call.* And the telephone gives the whole operation a close, personal, family feeling.

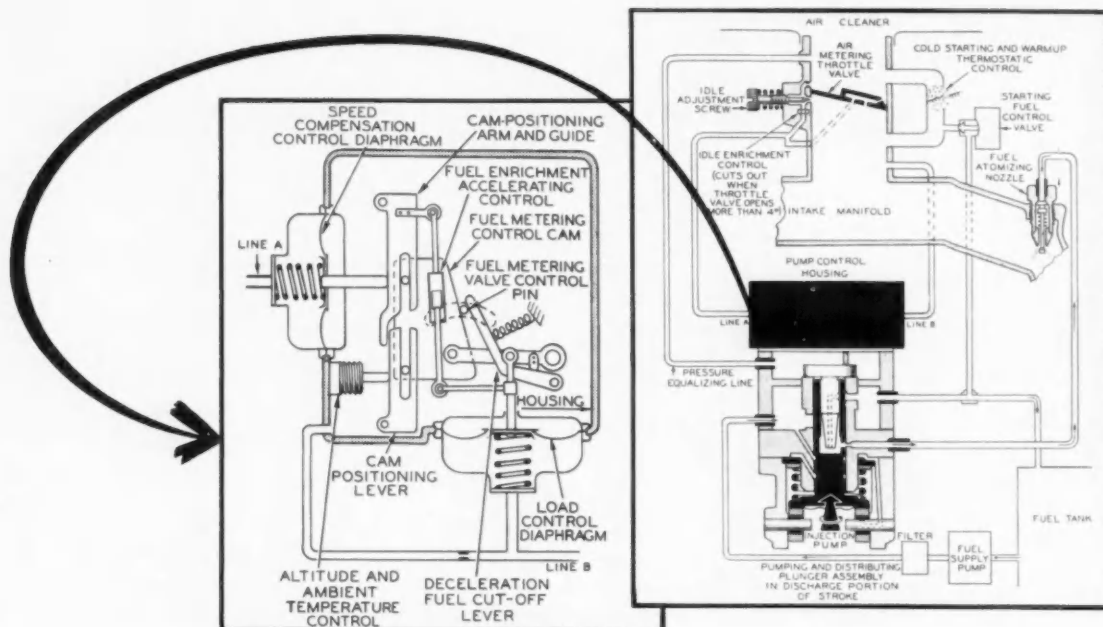
Private line telephone service can do a profitable job for you. To find out how, call your Bell Telephone Company business office. A representative will study your requirements at no cost to you.

BELL TELEPHONE SYSTEM



PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER
DATA TRANSMISSION SYSTEMS • CHANNELS FOR REMOTE METER-
ING AND CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV





Complete view of new fuel injection system is diagrammed above right. Drawing at left is blow-up of pump control unit which regulates proportion of the fuel/air mixture

Borg-Warner Introduces

Marvel-Schebler Fuel Injection

Feature of new system is matching of engine air requirements to fuel delivery using manifold pressure

▼ FUEL INJECTION system has been announced by Borg-Warner Corp., Chicago. As developed by B-W's Marvel-Schebler Products Division, its basic components are:

- Injection pump,
- Injection pump control,
- Air metering throttle,
- And, of course, spray nozzles.

The injection pump is of single plunger design that can be modified for 4-, 6-, or 8-cyl engines. Pumping and distributing plunger is driven at camshaft speed and the plunger reciprocation, or pumping motion is obtained by rotation of a cam face contacting a roller. For an 8-cyl engine, the cam has 8 lobes.

Distribution of the metered quantities of fuel is obtained by plunger rotation with the discharge port

in the plunger connecting with a port in the plunger body as the plunger moves up on the cam lobe. On the down stroke of the plunger, inlet ports connecting to the plunger pumping chamber connect with ports in the plunger body leading to the fuel reservoir, and plunger chamber is filled during this down stroke. The amount of fuel discharged during the following pumping stroke depends on the angular position of the fuel metering valve in relation to the plunger.

At the closed throttle, or idle cut-off position, a passage in the fuel metering valve connects with ports in plunger and plunger body during the full pumping stroke, and the fuel in the plunger chamber is spilled back to the fuel reservoir rather than through a discharge outlet leading to an atomizing nozzle.

The angular position of the fuel metering valve is controlled by the air throttle. This meters the air flowing to the engine cylinders and—by manifold vacuum pressure control—establishes the proper position of the fuel metering valve so that the pumping and distributing plunger will discharge to each cylinder the amount of gasoline needed for the correct fuel-air mixture.

(TURN TO PAGE 176, PLEASE)

CF
CONSOLIDATED FREIGHTWAYS

USES

SHULER AXLES



THERE ARE NO BETTER AXLES, AT ANY PRICE!

Since 1915, Manufacturers of: *One-Piece* Tubular Heavy-Duty Trailer Axles; Front Axles for Trucks, Busses, and Off-Highway Equipment; Low-Bed Machinery Trailer Axles; Heavy-Duty Vacuum and Air Brakes.

SHULER AXLE COMPANY, Incorporated, LOUISVILLE, KENTUCKY

SUBSIDIARY OF FULLER MANUFACTURING COMPANY

SALES OFFICES in CHICAGO, DETROIT, OAKLAND and TULSA

WEST COAST WAREHOUSE
Oakland, California

SOUTHWEST WAREHOUSE
Fort Worth, Texas

When an Emergency Strikes —

TRAILERS BECOME STATE HEADQUARTERS

Mobile units are stationed miles from capital during CD's mock atomic bomb attack on Indiana



Trailers from the Indiana trucking industry were lined up for conversion into emergency offices during "Operation Alert, 1957," a nation-wide CD experiment

V "PULL THE governor's office a little to the left, Mac."

"Gotcha—now how's that?"

"Fine. He should be sitting pretty now."

"Here he comes."

A group of distinguished men got out of Indiana's official cars and strode over toward the two men.

"Right up these stairs, Governor, is your office."

Indiana's chief executive, Harold W. Handley, climbed a set of temporary steps and entered a semi-trailer.

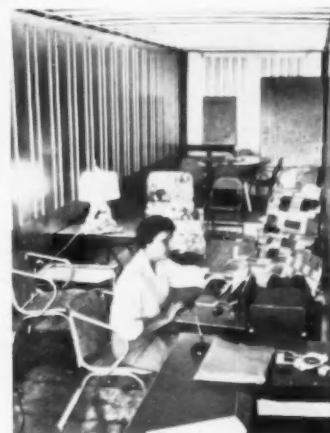
At that moment Indianapolis was "about to be blown to bits by an atomic bomb," but the governor was "safe" from attack and could direct emergency law enforcement and evacuation from his convoy headquarters 25 miles north of the state capital.

He was taking part in "Operation Alert, 1957" in which Indiana truckers played a key role. The highway transportation industry rallied to the Civil Defense alert and donated 19 trailers for use as state headquarters.

(TURN TO PAGE 94, PLEASE)



Indiana Motor Truck Assn. representatives (in doorway) Harold Dungan of Lucas Motor Express, Mrs. Norma Rednour of IMTA office, James Prewitt of Interstate Dispatch and (on ground) James E. Nicholas, general manager of IMTA, make final check with Superintendent of State Police Harold Zeis before activating mobile center



The mobile executive suite inside a trailer where the governor had his offices during the "bombing"



Vital spot in the CD set-up were communications headquarters such as the teletype trailer



Taking the mountains of West Virginia and Pennsylvania in stride . . . or hauling through heavy traffic North and South . . . that's the kind of stalwart performance that proves the stamina and

durability of Novick's 165 Macks. These Mack Thermodyne® Diesel COE's, for instance, help keep Novick's 19 terminals humming by rolling up almost 100,000 repair-free miles per year.

Mr. A. J. Novick, president of Novick Transfer Co., Inc. says:

“MACK dependability pays off in higher earnings”

“Tough routes . . . tough schedules . . . tough competition. That's how it goes in this business. You don't stay in the running very long if you don't have top-notch trucks. We operate the best . . . and that means *Macks*.”

Mr. Novick goes on to explain:

“For one thing, there's Mack fuel economy. Pulling loads up to 15 tons, and averaging 300 miles per day, our Mack Diesels are giving us seven miles per gallon. Maintenance costs are low . . . repair costs are negligible . . . and our drivers will pit their Macks against anything else on the road for smooth handling and general performance.

“Most important of all, Macks deliver the goods

—on time—every time. That's why we've added 66 Macks in the past 13 months. Based on our long experience, I'd say that the smartest move any hauler could make is in the direction of his Mack distributor”.

* * *

Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

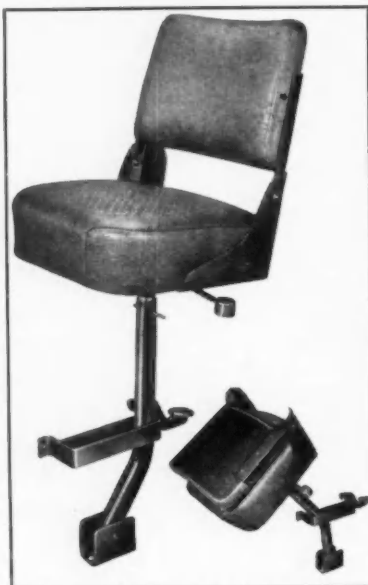
MACK
first name for
TRUCKS

Sliding Wall Trailer

Here is something new in truck trailer design that is paying off in bigger payloads for its originator, C. D. Spencer, above, owner of Independent Tranfer in Albany, Ore. The open-sided trailer was originally designed to haul large rolls of paper which could be loaded and unloaded in less time and placed on end to utilize the full 8-ft width of the bed. Supports are hand removeable for quick loading, and sliding canvas doors protect the cargo on both sides.



New Model 310 Multi-Purpose Seat



Model 0-4418 Tilt-Away Seat

American Seating comfort helps speed your deliveries!

American Seating light-delivery truck seats are comfort-designed to reduce driver fatigue; help meet tight delivery schedules.

The all-new Model 310 Multi-Purpose Seat has coil springs in cushion and seat back; adjusts vertically to four positions, 3" range; fore and aft to five positions, 4" range. It's craftsman-upholstered, with reinforced French seams, for long life and hard

service. Metal parts are finished in high-lustre baked enamel.

The Model 0-4418, with its full-depth foam-rubber cushion, is covered in vinyl-coated fabric upholstery—perforated for ventilation. Vertical adjustment, 4" range with five positions; entire seat hinges at floor for easy entry and exit.

Next time you order, ask for comfort—ask for American Seating!

AMERICAN SEATING



GRAND RAPIDS 2, MICHIGAN

WORLD'S LEADER IN PUBLIC SEATING

Branch Offices and Distributors in Principal Cities. Manufacturers of Transportation, School, Theatre, Auditorium, Church, Stadium Seating, and Folding Chairs.

Trailers Become . . .

Continued from Page 92

The alert went into effect at 8 a.m. Within an hour all the state offices had been set up in trailers at a 4-H Club camp outside the city. The governor and his staff were not evacuated from the Statehouse until 11 a.m. when the attack phase of the alert began.

For three days the trailers stayed on location housing volunteer CD, state and Red Cross workers. Indiana was one of few states in the USA which remained on the alert for the full period of the operation.

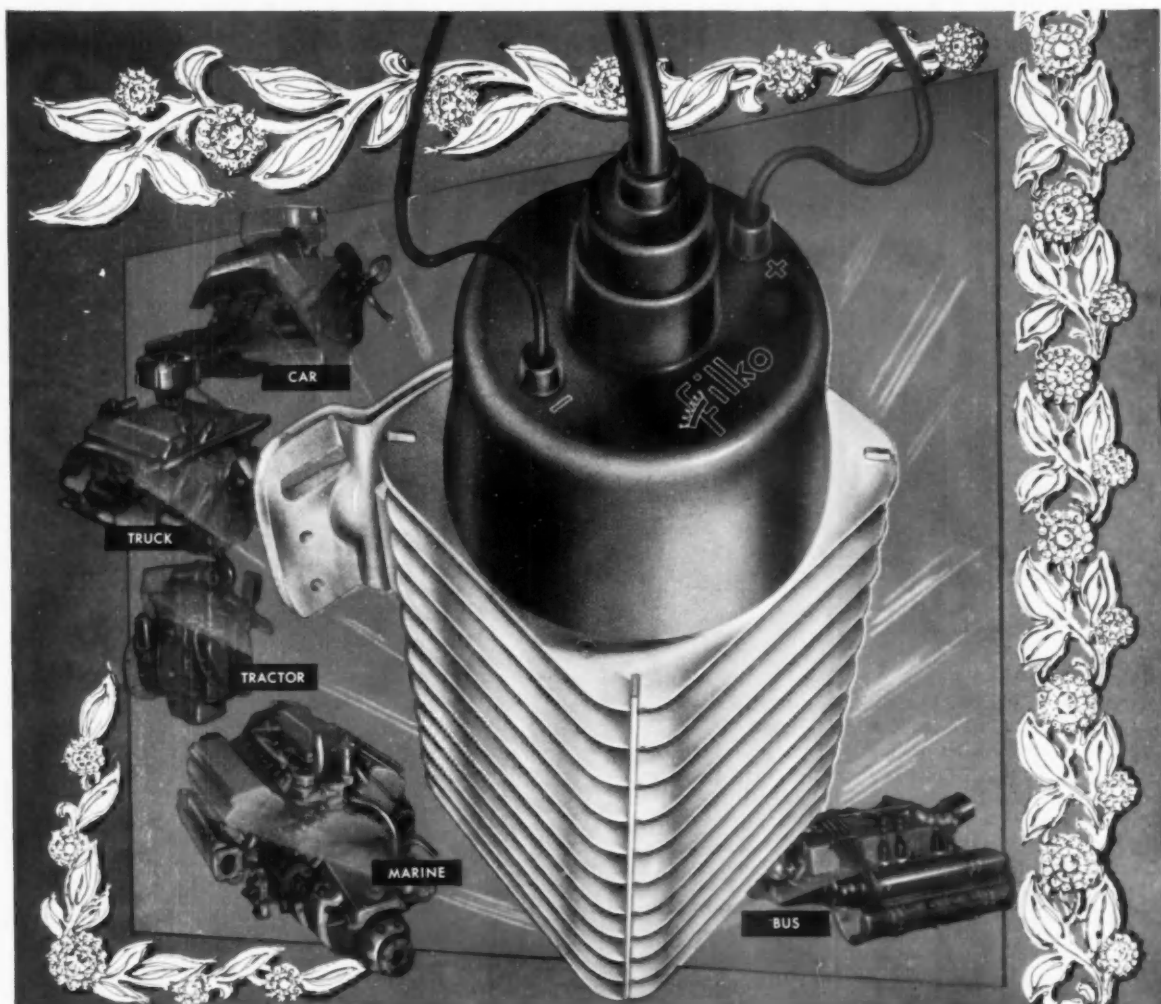
Two of the vans, one for men and one for women, were used as sleeping dormitories for off-duty personnel.

Power for the trailer center came from a General Motors Corp. loan of a Detroit Diesel portable generator. Dependent on this power were a field hospital, a well-stocked cooking and dinner pavilion, semi-trailers used for communications, the governor's office and other necessary field units.

James E. Nicholas, general manager of the Indiana Motor Truck Assn., had long urged the state CD organization to experiment with a mobile field headquarters. He said that he and state CD officials found more success than they expected.

END

Please Resume Reading Page 96



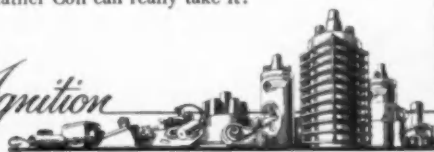
every engine deserves the *Crown Jewel* protection of the
new Filko all weather coil!

Here's the heavy duty coil that's built to ignore the weatherman! Unique, "Weather-Guard" neoprene hood with snorkel type leads make it really water-proof. Full 173 sq. in. of heat dissipation area defies the hottest weather. Low current draw assures easier frigid-weather starting. In the Crown Jewel tradition, there's extra quality all the way through this tougher, more rugged coil—from extra amounts of copper in the windings (the total is 2 miles!) to its rust-resistant aluminum finished case. Yes, this powerfully-built new Filko All Weather Coil can really take it!

- Completely weather-proofed — can't short out!
- 5 times the heat-dissipation of conventional coils lengthens life!
- Low current draw for quicker cold weather starting!

Send for catalog

the Crown Jewels of Ignition



F. & B. Mfg. Co., 4248 W. Chicago Ave., Chicago 51, Ill.

Warehouses in Los Angeles, Oakland, Miami, Fort Worth, New York, Boston, Atlanta, Cleveland, Lubbock, Little Rock, Philadelphia, Kansas City





BEFORE



AFTER

Autocar Offers Truck Rebuild Kit

USED OR WRECKED trucks can be made practically new again at less than half the cost of a new truck, says Autocar of its new truck rebuilding kit. The kit, consisting of current-model production parts, can be used to rebuild any make of truck comparable to Autocar's 6-wheel diesel Models Nos. DC 10264 and DC 10264-L.

Providing all parts for a completely new Autocar chassis without power train, the kit is produced by the Autocar Division, The White Motor Co., Exton, Pa.

Total cost of rebuilding

a typical truck with an Autocar kit averages from \$5,000 to \$6,500. This includes cost of the kit, selected optional parts and labor. With truck chassis components priced as a unit, the kit is said to simplify the settlement of insurance claims on wrecks.

The basic kit consists of frame cross members and brackets, front springs and mounting parts, engine mounting parts, clutch control parts, steering gear and transfer lever assembly, head lamps and mounting assembly, fender assemblies and mounting parts, running board and splash apron assembly, hood panel assembly, and cab mounting parts.



Truckstell Announces Dual Drive Tandem

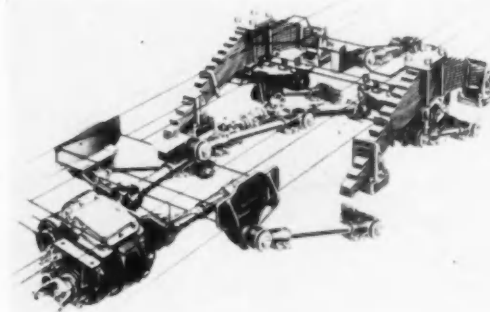
TRUCKSTELL Mfg. Co., Cleveland, Ohio, announces a dual drive tandem with 40,000-lb tandem bogie capacity rating. Says Truckstell . . .

- The new tandem can be installed with axles of up to 21,000 lb capacity.
- The unit should be interesting for off-highway application.
- It is especially adaptable to Chevrolet 9000 and 10000 series trucks equipped with two 18,000-lb axles and to Ford 900 series trucks with 21,000-lb axles.

Features of the new suspension

include a 20-in. clearance between trunnion and road surface, rubber-mounted torque rods and free-end walking beams in parallelogram arrangement, single gear box incorporating a 3-speed auxiliary and axle drive selector (dual or single-axle drive) controlled from cab.

Auxiliary transmission ratios are (1) 1:1 direct, 1.22:1 underdrive and 2.22:1 puller, or (2) 0.81:1 overdrive,



1:1 direct and 2.22:1 puller. A power take-off is available as a built-in option.

Tubular drive lines are short in length and balanced to eliminate whip. High angle needle-bearing joints and long slipper joints are designed for extreme articulation. Shaft in carryover pillow block operates on large ball bearings in sealed oil reservoir. Springs are walking-beam type, 15-leaf, 60 x 3 in.

Domestic HHG Containers

Imperial Van & Storage, Inc., Long Beach, Cal., reports savings of \$1 per cwt with these 8-ft cube containers on pallets in its household goods moving operation. Used with Fruehauf flat-bed, drop frame trailers, the containers reduce handling of furniture. Five containers fit on a 40-ft trailer. Several containers can be loaded at a time. Each container holds about 3500 lb of cargo.

300% MORE RESISTANCE TO OVERCHARGE*
 GREATER RESISTANCE TO UNDERCHARGE*
 THE 2 PRIME CAUSES OF BATTERY FAILURE

WITH
 NEW



National

Rugged heavy-duty batteries built for severe service—transcontinental runs or start-and-stop city work. Look at these features:

- thicker plates, heavier plates—for faster surer starting in any weather
- tougher hard-rubber containers—resist acid, heat, cracking
- double glass-plus-rubber insulation—prevent plate-oxide shedding
- element protectors—reduce damage from careless servicing
- National Deepwells—like a camel this National battery goes months without water

See how these new National silver cobalt batteries can save you money—see your National dealer or write

**GOULD-NATIONAL
 BATTERIES, INC.**
 SAINT PAUL 1, MINNESOTA

*Overcharge and undercharge are the two worst battery killers, accounting for 4/5ths of all battery failures! New National batteries withstand these killers better—have triple resistance to overcharging, greater resistance to undercharging, compared to SAE minimums.

Silver Cobalt
 SEALED CHARGE
 TRUCK — BUS — DIESEL
 BATTERIES

WITH THE

SILVER LINING

HERE'S THE STORY OF
 THE SILVER LINING

Corrosion eats away battery grid material just like rust eats away bare steel. Coated steel lasts indefinitely because it doesn't rust. Similarly silver cobalt coats the battery grids, protecting them from corrosion. The grids last longer—the battery performs better.



Bare unprotected
 steel rusts



Coated steel
 resists rust



Unprotected battery
 grids corrode

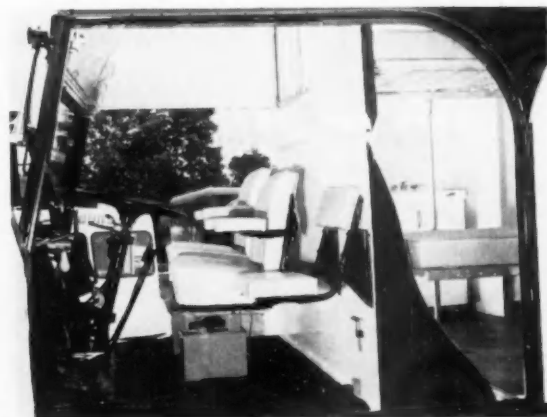


Silver cobalt grids
 resist corrosion

National Makes Tractor a Streamlined Motel

PLACED UPON the highways in Chicago recently by National Van Lines, Inc., were two tractor-trailer combinations so streamlined that they look to most observers like one solid piece of equipment. Long and sleek, the tractor and trailer seem to melt into each other in the straight-line design. The ultra-modern "look" does not end with the exterior styling, however.

Behind the high-perched driver—he's eight feet above the ground in the 12¼-ft-high cab—is a compartment which could put some motels to shame.



"Sleeping-in" accommodations,

including two bunks, a lavatory and a wardrobe for the personal belongings of the driver and the assistant, allow the team to take a cross-country trip relaxed and fresh.

The tractors are built for carrying several men so additional manpower is available for loading or unloading cargo. Also, they have additional storage space underneath the driver's compartments. Built by General Body on a white 3000 model, they cost \$12,500 each.

The 32-ft streamlined

high cube trailers, built by Fruehauf, cost \$6,000 each. The trailers are marked with cubes for facilitating space measurements.

Demountable Sand Spreader Ups Dump Truck Utility

AN ORDINARY dump truck can be converted into a sand spreader for use on icy streets in less than 15 min, with the use of a new spreader manufactured by Fox River Tractor Co., Appleton, Wis.

Quick installation permits the conversion of a fleet of dump trucks quickly in sudden snow storms to distribute sand, salt, calcium chloride or chips.

The spreader is anchored

to the truck box by tie rods with built-on hand cranks. Adjustable shafts lock on the tailgate latches. The spreader is simply lifted from its storage dolly onto the truck body, the shafts at the tailgate lined up, and the hand cranks are run down.

The driver operates the spreader over the road by the use of feed and throttle control within an arm's length of the cab.

An auger feed is

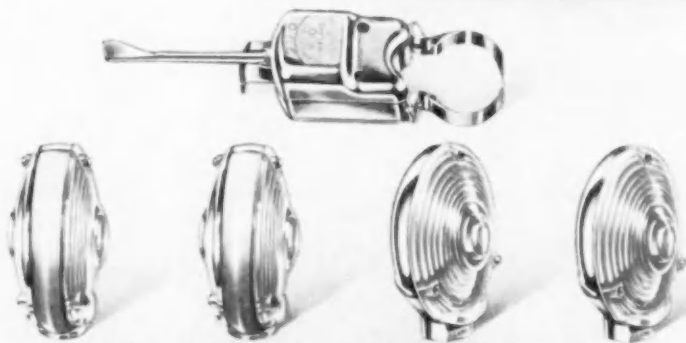
used to give a steady flow of material to the spinner. The spread of sand is adjustable from eight to 32 ft and the driver adjusts the density from the cab. Over-the-road speeds may range from 5 to 40 mph, according to the manufacturer.

The spreaders come in capacities (heaped) of 5, 5½ and 6¼ cu yd. The 5-yd boxes weigh 2280 lb. They are powered by a 2-cyl. air air-cooled Wisconsin gasoline engine rated 14.6 hp at 2600 rpm. The engine is furnished with starter and enclosed reduction gears.



MR. FLEETOWNER, GOT AN EAGLE-EYE FOR PROFITS?

*feather your nest with the
protection and economy of
the new 5-in-1 **SIGFLARE** system!*



**INSIST ON THE 5-in-1 SIGFLARE SYSTEM FOR
ALL AROUND PROTECTION . . . ALL THE TIME!**
More than meets your A.T.A. needs.

Signal-Stat

always creating — never imitating

Investigate the exclusive advantages of the Signal-Stat Sigflare System. If you have an eagle-eye for profits, you'll see why it's a "must" for every one of your vehicles. Specify Sigflare . . . don't let yourself be talked out of the profit margin assured by a lower accident rate. Only Signal-Stat offers this complete 5-way protection with just one switch and 4 lamps:

1. the most powerful Class A-Type 1 directional signals with positive pilot action.
2. simultaneous flashing of all 4 signal lamps for emergency disability warning.
3. two Stop lights as powerful as Class A-Type 1 signals.
4. two Tail lights as powerful as the law allows.
5. automatic tail light control for far more effective turn signals at night.

See your jobber, or write for complete details.

SIGNAL-STAT CORPORATION • 523-539 Kent Avenue • Brooklyn 11, New York

September News Roundup

North Carolina Does It Again

North Carolina Motor Carriers Assn. again in 1957 set aside a whole week to choose three "Champions of the Highways" in their State Truck Roadshow (May, page 74). In their 18th annual eliminations the association packed the Azalealand arena at Wilmington for the finals.

Most of the 29 state finalists had been selected through company-wide roadshows. They then spent a week

1957 Domestic Truck Factory Sales by GVW

	6,000 lb. and less*	6,001-10,000*	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	26,001-33,000	Over 33,000	Total
January	42,027	10,018	1,836	7,203	3,514	3,099	2,932	2,579	73,208
February	37,847	11,292	2,391	10,407	3,023	3,139	2,795	2,799	73,693
March	39,622	11,272	2,438	8,362	3,389	2,691	2,935	2,814	73,523
April	39,176	12,954	2,958	13,003	5,713	3,973	3,271	2,362	84,110
May	38,830	12,813	3,734	12,164	6,649	3,541	2,979	3,220	82,930
June	38,819	11,717	3,600	10,638	5,061	3,450	2,602	2,972	76,859
6 Months—1957	234,321	70,066	16,957	61,777	26,349	19,893	17,514	17,746	464,623
6 Months—1956	203,820	83,661	18,910	84,438	29,627	27,957	39,543	**	487,956

* Prior to Jan. 1957, vehicles below 10,001 G.V.W. were grouped as follows: "5,000 and less" and "5,001-10,000."
** Included with 26,001-33,000 group. Source: Automobile Manufacturers Assn.

demonstrating their driving ability and their general understanding of the trucking industry.

Individual Praise Stressed

Human relations and the recognition of individuals was stressed as the most important element in industrial relations at the annual three-day forum held at Detroit under the sponsorship of the Industrial Relations Committee of the American Trucking Assn., Washington, D. C.

Ivan L. Willis, Chicago, vice presi-

dent of International Harvester Co., told the nearly 150 trucking company executives that individual recognition and encouragement of employees to develop their own abilities are important factors in an industrial relations program.

Welby Frantz, vice president of Eastern Express, Terre Haute, Ind., said the individual is the basic element on which all industrial relations must be founded.

Donald P. Kipp, president of Kramer Bros. Freight Lines, Detroit,

(TURN TO PAGE 178, PLEASE)

ACCIDENTS AND INTERCITY VEHICLE-MILES REPORTED BY CLASS I MOTOR CARRIERS OF PROPERTY TO INTERSTATE COMMERCE COMMISSION WITH FREQUENCY AND SEVERITY RATES, BY TYPE OF COMMODITY OR SERVICE FOR YEAR 1956

(Data from releases of Interstate Commerce Commission)

Motor Carriers by Type of Commodity or Service:	Number of			Property Damage	Intercity Vehicle Miles (Thousands)	Rates Per 100,000 Vehicle Miles			
	Accidents	Deaths	Injuries			Accidents 2/	Deaths 2/	Injuries 2/	Prop. Damage 2/
1. Commodities in Tank Vehicles	1,100	76	519	\$ 1,673,980	649,617	0.17 (1)	0.012 (3)	0.08 (1)	\$258(2)
2. Agricultural Commodities 1/	135	10	67	208,940	72,917	0.19 (2)	0.014 (6)	0.09 (3)	296(3)
3. Miscellaneous Services 2/	175	12	78	229,130	92,917	0.19 (3)	0.012 (4)	0.08 (2)	247(1)
4. Merchandise & Supplies for Retail Stores	206	9	105	257,880	70,886	0.29 (4)	0.013 (5)	0.15 (6)	364(7)
5. Building Materials & Bulk Loads	409	19	194	496,830	138,549	0.30 (5)	0.014 (7)	0.14 (4)	358(6)
6. Manufactured & Semi-manufactured Prods.	576	28	339	750,480	177,668	0.32 (6)	0.016 (9)	0.19 (10)	423(9)
7. Explosives & Other Dangerous Articles	116	3	65	115,870	35,161	0.33 (7)	0.009 (1)	0.18 (9)	329(4)
8. Heavy Machinery & Large Unit Loads	449	15	184	537,330	130,406	0.34 (8)	0.012 (2)	0.14 (5)	412(8)
9. General Commodities	15,042	678	7,625	20,377,220	4,277,966	0.35 (9)	0.016 (10)	0.18 (8)	476(11)
10. Motor Vehicles	3,509	144	1,648	3,254,860	968,454	0.36 (10)	0.015 (8)	0.17 (7)	336(5)
11. Food Products & Beverages	444	28	231	739,310	104,839	0.42 (11)	0.027 (13)	0.22 (13)	705(13)
12. Refrigerated Commodities	905	51	467	2,040,610	212,442	0.43 (12)	0.024 (12)	0.22 (12)	962(14)
13. Household Goods	1,440	61	617	1,357,420	310,514	0.46 (13)	0.020 (11)	0.20 (11)	438(10)
14. Iron and Steel	892	54	430	1,063,910	179,637	0.50 (14)	0.030 (14)	0.24 (14)	593(12)
Total:	25,398	1,188	12,569	\$33,103,770	7,422,003	0.34	0.016	0.17	\$445

1/ This group includes only carriers holding operating authority from this Commission, and having annual operating revenue of \$200,000 or more.

2/ Figures in parentheses are standings in order of frequency.

3/ Carrier groups reporting less than 100 accidents per year.



Like to have a supervisor on every truck...on every run?

You can...with a low-cost Wagner-Sangamo TACHOGRAPH!

When you equip your trucks with Wagner-Sangamo TACHOGRAPHS, it's like having your Fleet Supervisor ride in every cab—without leaving his desk!

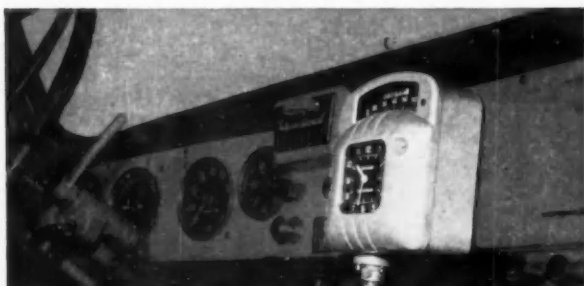
With the TACHOGRAPH chart you get a graphic report of every run: when engine idled...when truck was in motion...how fast it traveled...when it stopped and for how long. The Wagner-Sangamo TACHOGRAPH automatically and permanently records this vital trip information.

In addition, illuminated dials show your driver the time of day, MPH, and total mileage. RPM models also

available. A red light warns him when your company's speed limit is exceeded.

The only part of a trucking operation to bring in any money is "the vehicles in motion"—everything else is overhead. What better reason to provide constant supervision at the payoff point: on the moving truck with the driver at the wheel.

Bulletin SU-3 explains why Wagner-Sangamo TACHOGRAPHS are popular with drivers and supervisors alike—profitable for operators. Mail the coupon today for your file copy.



Wagner Electric Corporation

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Company _____

Address _____

City _____ State _____

We operate _____ Vehicles
(NUMBER)

557-11

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Whether their hauls be long or short, cost-conscious fleet owners everywhere depend on KRAFT System Recapping to provide safe, trouble-free, extra-profit mileage day after day.

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- Factory-trained recappers
- Guaranteed service Coast-to-Coast



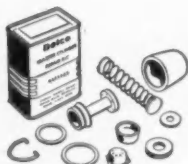
BY THE GENERAL TIRE & RUBBER COMPANY



STOP WITH



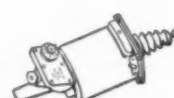
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BRAKE SHOES**
Made and assembled to
original equipment speci-
fications.



**MASTER CYLINDER
REPAIR KIT**
All parts needed to put
master cylinder in normal
operating condition.



**WHEEL CYLINDER
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All parts necessary to put
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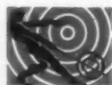


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BRAKES**
Complete units and serv-
ice kits for General
Motors vehicles.

Delco Super 11 brake fluid improved with HTD works better and lasts longer under all operating conditions. It flows smoothly and easily in the coldest weather. Yet, it doesn't boil away or lose its effectiveness when brakes get hot. Chemically inert, physically stable Delco Super 11 is compatible with all brake systems' rubber and metal parts. It *exceeds* S.A.E. and govern-

ment specifications for heavy-duty brake fluid, and it is original equipment brake fluid for 1957 General Motors cars. Specify it with confidence for every hydraulically braked vehicle. In convenient containers, from pint cans to 54-gallon drums. Available everywhere through the United Motors System or General Motors car and truck dealers.

General Motors Values from



Moraine Products

Division of General Motors, Dayton, Ohio

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GO WITH



MORaine-400 BEARINGS—toughest automotive engine bearings ever made.



MORaine BI-METAL BEARINGS—precision built to original equipment specifications.



M-100 BEARINGS—excellent fatigue resistance and longer life expectancy.

MORaine GAS FILTERS! Glass-bowl and pancake all-metal types assure dirt-free, lint-free fuel under all operating conditions.

Here's a bearing line that can take care of *all* engine bearing replacement jobs—car, truck or bus. It's Moraine, it's *complete*, and it's conveniently available from a single source. Moraine is the original equipment bearing for General Motors cars and trucks—a

ready-made market. And there's an equally high-quality Moraine bearing for every other replacement job you do. Moraine service bearings are readily available everywhere through the United Motors System or General Motors car and truck dealers.

General Motors Values from



Moraine Products

Division of General Motors, Dayton, Ohio

Trailways "5 Star" Routes

Continued from Page 81

very popular with the drivers, according to J. D. Welsh, assistant general manager in charge of operations. "Shifting is the easiest I have ever seen on a bus," he said.

Maintenance Training

Seating, using moulded air foam

rubber cushioning material, was created by the National Seating Co., Mansfield, Ohio. The seats feature adjustable backs and headrests. The restroom was fabricated by Viscount of England. Lubrication is manual, with standard fittings.

Maintenance is handled by the regular Continental Trailways crews, who were trained for two months by German engineers and mechanics sent with the pilot model of the Golden Eagle.

Academy Express

On the other hand, in preparation for shipment of the "Academy Express" coaches, bus company maintenance supervisors were sent to Germany for briefing and for observation of the 5000-mile road tests given the vehicles before loading.

Automatic lubrication by means of tubing leading from a hydraulic pump at the front to all wearing surfaces is a feature of the Academy Express.

The two coaches, also built by Kassbohrer, were purchased at a cost of \$47,000 each. The 60-ft coach will accommodate 65 passengers.

Easy to Handle

Extremely maneuverable despite its length, the 10-wheeled Academy Express has an inside turning radius of 40 ft because of its swivel, the same as a conventional bus of 35 or 40 ft.

By means of its own steering mechanism, the rear section exactly tracks the rear wheels of the front section. This is possible because of the design within the joint connecting the two sections of the bus. It eliminates the driver's concern about clearance, and according to T. S. Reece, vice president and general manager of Continental Trailways Bus System, the coach operators are easily trained to compensate for the additional length. The turntable joint is also designed to eliminate the possibility of jackknifing.

Construction Details

Like the Golden Eagle, the Academy Express coach is constructed of high tensile steel and aluminum, lightweight materials which give it an empty weight of about 30,000 lb.

The refreshment bar, hostess' seat and other passenger serving facilities are located in the center section, while the restroom is in the rear of the trailing unit. One

(TURN TO PAGE 112, PLEASE)

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Governors

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"We always use Kester Radiator Flux-Core Solder, Bert; stops leaks quick."



"You'll like the way Kester Solder goes to work, Harry. It's always fast, neat, economical."



"Nothing like Kester Solder, Fred, for keeping costs in line."



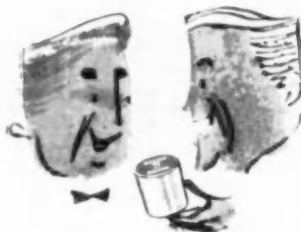
"We are sold on Kester's 'Resin-Five' Core Solder, Joe... speeds up electrical and radio work."



"Kester Plastic Resin-Core Solder is also good for auto radio and electrical work, Paul."



"Our work gets out faster now, Bill, since we switched to Kester Solder."



"When it comes to the right amount of tin, George, you have to hand it to Kester Solder."



HOW THE WORD GETS AROUND

You hear comments like these everywhere auto men get together to "talk shop." It's a fact . . . there is nothing quite like Kester Solder. And that's why it's so universally popular.

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Chemical Carrier Reports:

All-Stainless Tanker Carries Bigger Variety of Payloads...cuts cleanout time



Here's an actual case that demonstrates why it pays chemical carriers to specify *all-stainless* tankers for full versatility and faster cleaning.

A tank was made of 18-8 stainless steel for a leading liquid chemical carrier. It was ordered equipped, on a trial basis, with pipes and valves of a light metal. As soon as the tank went into service it became clear that these parts were limiting its usefulness and increasing cleaning time for the entire unit.

Within 6 months, stainless steel replacements were ordered for these non-ferrous parts. Now the fleet operator gets much greater versatility from this tanker than when it first went into service. These are the reasons why:

1. He can now transport the full range of chemicals, from alkalis to acids, that the stainless steel tank was originally designed to handle. Payloads are no longer limited by the less-versatile light metal.

2. He can use the same high-strength, fast-acting,

caustic detergents he uses for his other stainless steel tankers. He doesn't have to "go easy" because of less corrosion-resistant valves and pipes. Now they're stainless, too.

Specifies All-Stainless Tankers

Based on this evidence, all the future stainless steel tanks ordered by this fleet operator will be *all stainless*—wherever cargoes touch metal. He is convinced that this is his best assurance of long-run economy.

When you order chemical tankers, take advantage of this carrier's experience. Specify stainless steel throughout. And for top-quality stainless, specify Armco Stainless Steel. We will be glad to send you more information about the many advantages of truck and trailer tanks made of Armco Stainless Steel for transporting liquid chemicals, foods, and petroleum products. Just write us. Ask for our new booklet, "Make Your Tank Fleet Versatile—Go Stainless."

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in batteries

A revolutionary, amazing,
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- Wets dry batteries . . . dries wet batteries
- Joins split atoms**

If this sounds fantastic to you, don't worry. It is!

But look at it this way—if a miracle product like BONF is ever discovered, you can bet we'll do the discovering. Our long list of "firsts" reads like a history of the battery business. We hold over 200 current patents covering battery materials, design and processes.

This means more months and miles of low-cost, trouble-free battery service . . . when you equip your vehicles with Exide batteries.

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Radio-TV
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exclusive TVRS cable

The same conductor that carries the current
prevents ignition interference and
increases spark plug life

Packard Electric T.V.R.S. ignition cable has a non-metallic conductor that does two jobs simultaneously: It *carries* the current that makes the spark; and it controls the intensity of spark. Thus, with one essential part, you offer increased spark plug life and prevent ignition interference in the car radio or on nearby television sets.

Extensive laboratory tests prove that by distributing resistance over the entire ignition wiring circuit, T.V.R.S. cable does a more effective job of

suppression than can be obtained by spot suppressors. As a result, there is far less broadcasting of interference and less spark plug erosion.

Packard T.V.R.S. cable is original equipment on almost half of the vehicles made today. And, since no spot suppressor can equal its performance, T.V.R.S. is an important improvement feature for vehicles not factory-equipped with T.V.R.S. Available everywhere from Packard jobbers.



READY-TO-INSTALL KITS

Complete packaged ignition wiring sets with terminals attached are available. Packard Electric T.V.R.S. Suppressor Cable is also available on spools with separate terminals and illustrated instructions for making fast, trouble-free attachments. Ask for Packard Kit 420-K.

Packard Electric

Warren, Ohio



"Live Wire" division of General Motors

Trailways "5 Star"

Continued from Page 106

restroom was built in France and shipped to Germany for inclusion in the coach. The other was fabricated from component parts by the bus firm's body shop in Dallas.

Individual reading lights and ash trays are located on the back of each seat. There are two doors, one

forward and the second near the center of the coach.

Compression Brakes

Power is provided by an American-built Cummins NHB horizontal-stroke diesel engine, chosen for its compactness and performance on mountainous routes. The 200-hp "pancake" engine was shipped to Germany, where it was installed in the midsection of the forward part of the coach.

Another special "mountain route" feature is an extra system of exhaust brakes, which lock compression in the engine and use it to help stop the coach on inclines. The system, originally developed for use in the Swiss Alps, is now being introduced for trucks in mountainous parts of the United States.

The six-speed electric transmission, similar in some respects to the "synchromesh" transmission in automobiles, was also manufactured by Zahnradfabrik of Friedrichshafen. Servicing of the coaches in the company's Denver shop is made easier by the fact that differential, drive line and all other parts are standard.

With a higher gear ratio than in the Golden Eagle, the Academy Express engine must make about 2100 rpm to go 55 mph.

Air cooling equipment is not used on the Academy Express because of the shortness of the run and the nature of the climate in the part of Colorado the bus serves. Webasto heaters, special oil-burning units developed in Germany for use in the Alps, provide warmth when it is required.

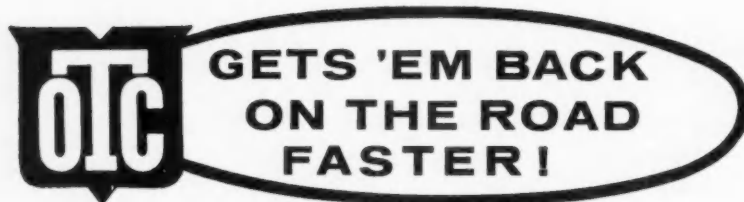
Luxury Service a Boon

Regardless of the type of equipment used, the introduction of first class bus service has proved a boon to the company. The original Los Angeles-to-San Francisco route has been extended south to Sacramento and San Diego, Cal., and north to Portland, Ore., and Tacoma and Seattle, Wash.

Five-Star Luxury Service is also in operation on the Memphis-Little Rock-Hot Springs-Jackson, Miss.-New Orleans route, the Wichita-Kansas City, Mo., route and the Dallas-Houston route, the one on which the Golden Eagle was first used.

The fifth and newest 5-Star service is on the "Pikes Peak Scenic Route" between Pueblo, Fort Carson, Colorado Springs, the U. S. Air Academy and Denver. Only one of the buses is actually named the "Academy Express." The other is named the "Fort Carson Express" in honor of the other and larger military establishment on the route.

(TURN TO PAGE 116, PLEASE)



Speed repairs—get your units back working sooner—with OTC hydraulic pulling—installing tools—tools that save you time and money on repairs and maintenance . . . get your equipment out earning for you.

HERE'S AN OTC DAY- AND DOLLAR-SAVER

OTC HYDRAULIC 2-WAY 3-WAY PUSH-PULLER

This tool removes, installs hubs, bearings, gears, pulleys, sheaves, sleeves, bushings, cylinder liners—fast—on all your equipment . . . eases out stubborn rusted or "frozen" parts without distortion or breakage. Inexpensive adapters let your Push-Puller do hundreds of jobs.

Powerful OTC rams give you plenty of muscle—up to 100 tons—to do toughest jobs fast!

HERE ARE OTC

Push-Pullers and Power-Twin hydraulic rams saving time—saving money—

Send for your FREE OTC catalog—shows hundreds of tools in action.



Removing cylinder sleeve without removing studs. OTC sleeve tool and hydraulic ram also install new sleeves.



Kingpins come out fast with OTC Push-Puller and Power-Twin ram. Use on trucks, tractors, buses, cars.

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Sealing may be the small part of a job, but that's where you need profit protection on all the work done. Correcting "leakers" can eat up profit fast—why take such a risk when you can have dependable Victor oil seals and gaskets for every job.

Victor replacement sealing parts—oil seals and gaskets—are Original Equipment Quality. They're precision engineered and produced to factory specifications or better—never less. They're the best to be had, yet cost no more than others.

Whatever your sealing part need,

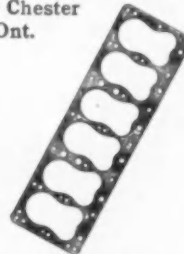
your Victor Jobber supplies it—the exact number, in individual parts or packaged sets, from his well-kept, factory-fresh stocks. He has the most complete and reliable catalog service—the Victor Gasket and Oil Seal Guides. He fills your order

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Today's higher compression truck engines are built for power and performance. They need a high quality gasoline. So be sure *your* tanks are filled with Good Gulf! It's cleaner burning—and because it is, Good Gulf eliminates a lot of engine troubles.

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Ask the Gulf Sales Engineer about Good Gulf. Get the facts on this quality controlled, knock-free gasoline today. Just call your nearest Gulf office . . . or mail the coupon below!

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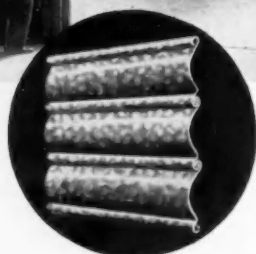
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Longer
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Kinnear Steel Rolling Doors



HEAVILY GALVANIZED For Lifetime Door Service

As the Sphinx and the pyramids are symbols of long life among the structural wonders of all time, so do Kinnear Rolling Doors represent the utmost in "Lifetime Door Efficiency".

The rugged strength of the interlocking steel slat curtain, *originated by Kinnear*, is one reason. Another is its coiling upward action—it opens out of reach of damage by wind or vehicles.

Equally important is Kinnear's thorough, heavy, high grade galvanizing. It adds a full 1.25 ounces of *pure zinc* to every square foot of metal, (ASTM standards). This galvanizing

is followed by Kinnear's own *test-proved, time-proved* Paint Bond treatment, which assures quick, thorough, *lasting* coverage and adhesion of paint applied after the doors are erected.

These Kinnear "life-extension" features give you *more years* of smooth, space-saving, time-saving door efficiency—*more years* of extra all-metal protection against fire, wind, weather, vandalism and intrusion. Kinnear Rolling Doors are built to fit openings of any size, with manual or motor operation to meet any need. Write for details.

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Offices and Agents in All Principal Cities



Trailways "5 Star"

Continued from Page 112

More and Faster Service

Immediate plans call for establishing routes between Kansas City and Denver; Dallas and Charlotte, N. C.; Wichita, Oklahoma City and Dallas; New Orleans, Shreveport, Louisiana, and Dallas; and Los Angeles and Phoenix.

Scheduled time will be cut still more as the current Federal Interstate Highway program progresses. Trailways predicts that the schedules of its luxury bus service will beat the trains as the construction of superhighways is completed between the cities which are terminals of the various 5-Star routes. As an example, with the completion of the Dallas-Houston Freeway which is now under construction, 5-Star buses will match or beat the four hours now required for the fastest railroad service between the two cities.

END

Please Resume Reading Page 82

Testing Pre-Fab Highway



Tests are being conducted on an experimental pre-stressed concrete roadway. In this picture, tremendous weight is being exerted on the concrete by jacking up against the overhead beam. The steel slabs on the beam weigh over 160,000 lb. Jones & Laughlin Steel Corp. built the 600-ft pre-stressed concrete strip in an effort to find new highway construction techniques. The pre-stressed concrete slab is only 5 in. thick as compared with the 10-in. thickness of normal highways. It also eliminates six joints every 400 ft. Wire strands running inside the concrete through flexible tubing hold the concrete in compression.



Diamond T Model 630 at a substation of Long Island Lighting Company

What are your truck requirements? Diamond T builds to them!

Nearly every truck job has its own special requirements. For Long Island Lighting these include an extra factor of safety, as assurance that emergency problems will be met promptly and certainly. So their Diamond T's are medium-duty in size, but they are heavy-duty in construction. They have used Diamond T's for many years now.

For Your Service

With Diamond T, you get exactly what you

need to do *your* job best. Frame, engine, transmission, axle or tandem—all are precisely matched to your need. Every Diamond T is "built-to-order."

Custom-built, but no price penalty

Your cost is less—not more. You get the benefit of volume-production costs, along with the lesser operating expense of the vehicle precisely matched to your needs. See your dealer, or write Diamond T Motor Car Co., Chicago 23, Ill.

DIAMOND T TRUCKS

Established 1905



***The Diamond
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Get a CSC quality anti-freeze in your picture!

PEAK ANTI-FREEZE

- Non-evaporating, permanent type.
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- Better protection from rust and corrosion than any other nationally advertised brand.
- A single-phase product that can be premixed to save downtime.
- It's guaranteed!

NOR'WAY ANTI-FREEZE

- Low cost, high strength methanol anti-freeze.
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Both can be tested with modern anti-freeze hydrometers.

COMMERCIAL SOLVENTS CORPORATION, 260 MADISON AVE., NEW YORK 16, N. Y.



Radio Systems Speed Customer Service

Continued from Page 87

with our trucks allows us to get to each job faster and keep every unit profitably at work. At present, there are 20 radio-equipped units in Dallas, 30 in Houston, 18 in Memphis and 20 in New Orleans.

In these areas our dispatchers control the trucks over the frequencies assigned to us in the ultra high frequency band by the FCC. Our transmitters operate at 457.95 mc. and our receivers operate at 452.95 mc. All of our base stations and mobile units operate on these frequencies in each of the cities we serve.

Nickel a Minute Savings

Our pick-up and delivery costs run well over \$3.00 an hour—more than a nickel a minute. It is not hard to figure that minutes saved per truck, multiplied by the number of trucks operating, amounts to quite a substantial sum.

On the basis of a nickel a minute, even a little waiting costs money. When a driver finds a shipper not ready with a load, or with his loading dock tied up, he can radio in and request another assignment to fill the time he would waste sitting idle.

Occasionally, a question about a shipment or other minor difficulty will develop during a stop. The driver can get immediate guidance by radio from the dispatcher.



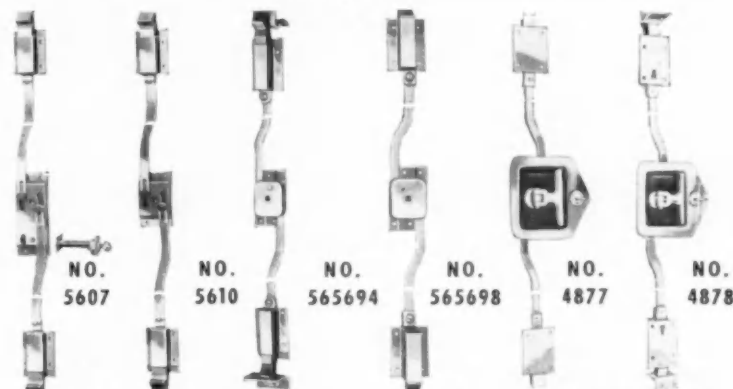
Solves Rush Problem

Here's another headache that our radio quickly cured. In the afternoon, many pick-up orders are called in. This is also the time when many of the drivers have completed service on regular routes. Before radio dispatching,

our switchboards would often be completely jammed with incoming calls from both drivers and customers.

The dispatcher's job was not an enviable one under such conditions. Business was lost because he couldn't locate needed trucks until the drivers called in. The expensive solution, of course, would be to add more trucks. We solved the problem by putting ra-

(TURN TO PAGE 124, PLEASE)



Delivery time saved is money saved and the convenient ease of operation of Eberhard "Slam-locks" with their cargo protecting facility is responsible for their strong acceptance by body builders.

Nos. 5607 and 5610 for heavy

doors, Nos. 565694 and 565698 for medium doors, Nos. 4877 and 4878 "Recesso" locks (with recessed folding handles) for compartment doors of tank and utility bodies.

Drop us a line. We'll be pleased to give you complete information on any or all of these items.

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Evarts Ave. • Cleveland 14, Ohio
DIVISION OF THE EASTERN MALLEABLE IRON COMPANY



Pride in WORKMANSHIP



The Mark of Quality

Means... Pride of OWNERSHIP

BROWN EXCELLENCE

...consists of much more than High Cube and Light Weight. It is the unbeatable combination of matchless workmanship and materials, together with Brown's years-ahead design and construction features. Each part is of the finest quality ... each workman, an experienced craftsman, takes pride in the work he does ... his operation gets individual care. Research-engineered in every detail, Brown Trailers provide the most in payload carrying capacity—to keep the weight in the freight.

High Cube... You Bet! Brown's advanced design has pushed back walls, floors, and ceilings ... put MORE PROFIT in the PAYLOAD — now 20% more than in previous models.

Light Weight... Absolutely! Brown Aluminum Trailers have been lightweight "Champs" for 23 years ... ever since Brown introduced frameless aluminum trailers in 1934.

LIGHTWEIGHT CONSTRUCTION—Semi-Monocoque construction ... the type developed for building heavy cargo planes ... eliminates the need for heavy frame. In Brown Trailer construction, side skins are structural members, not merely as weather shields. Stiffeners at 16" intervals make the sides actual thin-webbed-girders.

HANDSOME, DURABLE SKIN—Made of new, high-strength aircraft quality aluminum alloys. Tough aluminum core, sandwiched between layers of pure aluminum prevents rust and corrosion. Brown engineered corrugating greatly reduces weight, while actually increasing resistance to buckling and impact damage. Highly polished surface reflects heat and resists collection of dust and dirt ... water won't rust or discolor it.

TOP QUALITY FLOORS—5/4 Oak ship-lap flooring is standard on Eastern production, and vertical grain Douglas Fir tongue and grooved flooring standard on Western production. Lightweight extruded aluminum flooring, with Oak nailing strip along the sides, also is recommended for dry freight hauling. Composite steel and oak flooring is available which enables quick replacement of worn planks without disturbing others. Other floors to suit specific needs.

STRONG ROOF ASSEMBLY—Corrugated aluminum sheets ... seams structurally riveted ... and heat-treated aluminum stiffeners on 16" centers, make an exceptionally strong assembly. One-piece, full length top longerons of aluminum resist denting and scraping damage ... prevent entry of moisture and dust along junction of roof and sidewalls.

MOISTURE-TIGHT CONSTRUCTION—Brown's matchless resistance to moisture is a result of top quality sealing and structural riveting at all seams and joints. All openings protected by special sponge rubber seal.

INTERIORS—DRY FREIGHT... sealed 1/4" 3-ply plywood running the full length of walls is standard. Clean, efficient and attractive ... it is treated for greatest moisture resistance. Plywood on the lower wall can be combined with wood or metal slats on the upper wall, to secure cargo and prevent shifting. For this purpose Brown offers new phenomenally lightweight aluminum slats. Wear-bands and Rope-ties are also optional at extra cost.



RUGGED REAR FRAME—The rugged rear frame is reinforced at all corners and structurally welded into one compact unit ... provides a rigid frame for the rear doors—eliminates wracking and chafing. Bumper formed into rear end plate, two rubber shock absorbers and an approved ICC drop guard are standard.

"STRESS DESIGNED" REAR POST—New, narrow-face rear posts are "stress-designed". Formed of light tensile steel, and structurally welded into the rear frame for greater strength ... they are reinforced for greatest dock impact resistance.

MAXIMUM REAR OPENING—Advanced engineering of rear frame members provides maximum clearance for easy loading and unloading.

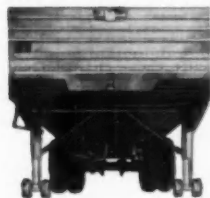
LIGHT, STRONG KING PIN—Settings from 18 to 36 inches offered as optional in fixed locations. Brown's King-Pin structure is 70 pounds lighter, yet stronger than ever. Light, high tensile welded-steel construction with design that minimizes stress, and assures trouble-free service.



Another of the many proud owners of Brown Aluminum Trailers.

REINFORCED FRONT END—Thick-wall, aluminum front corner castings reinforced to prevent damage. Completely removable with minimum effort. 10 inch corner radius provides ample clearance for turning . . . Interior corners are nearly square, for maximum use of cargo space.

RUGGED LANDING GEAR—Fifty percent stronger than lighter gear on the market. Brown's standard landing gear features 2-speed powerful lifting capacity, combined with great ease of operation. Brown offers as standard, their heavy-duty cast aluminum landing gear support bracket which spaces the gear legs for stability, providing the great strength necessary to resist vertical and fore and aft loads imposed in rugged operations.



REVOLUTIONARY ELECTRIC PAN—New circuit breaker installation now eliminates fuses, ends the inconvenience of carrying and installing them. Circuit breakers kick-out when line is overloaded or shorts develop. Resets automatically when trouble is corrected. The new Electrical Pan is more compact, easier to service in every way. Wiring throughout the trailer is fully weather protected . . . enclosed in conduit. Both conduit and outlet boxes provide quick easy accessibility.

NEW SIDE DOOR LOCK—Similar in operation to Brown's highly successful rear door lock. Sure, positive engagement cannot jar loose. Shafts of sturdy, tubular steel, and all parts plated to prevent corrosion. Recessed locking mechanism equipped for padlock or seal.

QUALITY MAKES THE DIFFERENCE—Put a lighter, stronger, higher cube Brown Trailer to work for you . . . it means greater payloads, more trips.

and more profits. Brown offers the advantage of standardized production of either standard or custom built aluminum trailers, with Brown sales and service facilities throughout the nation.

BROWN TRAILERS, INC., SPOKANE, CHICAGO, READING

MAIL COUPON NOW

Brown ALUMINUM TRAILERS

BROWN TRAILERS, Inc., Dept. A
P.O. Box 54, SPOKANE, Wash.

- ☐ Please Send Latest Information
☐ Have Your Representative Call

COMPANY

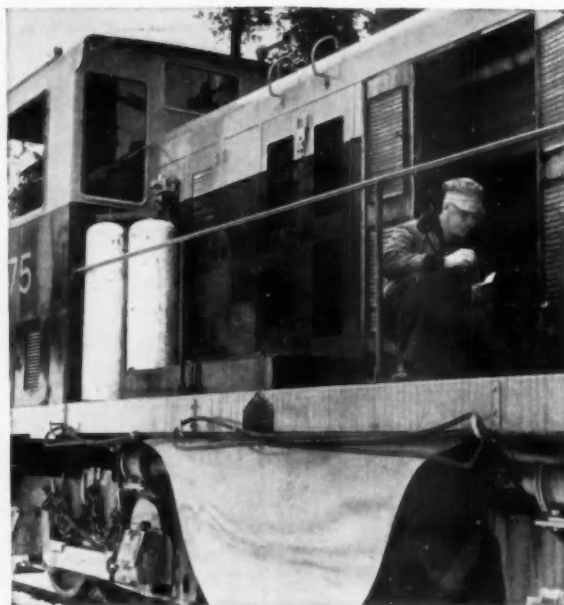
STREET

CITY

STATE



A single drop of used oil from this truck indicates true condition of the vehicle's oil . . . and tells a lot about the engine's operation.



Daily oil checks assure maximum lubrication efficiency in this diesel locomotive.

Now—they're testing used oil in minutes

THE NEED for a fast, accurate and practical method for determining the condition of used oil has long been one of the more serious problems confronting fleet operators. It's obviously wasteful to discard still-good oil, but operating a vehicle with contaminated oil could lead to costly engine damage. This was an unsolvable condition which maintenance men had come to accept.

Since no two vehicles, even of the same make and model, are identical in performance or operation, maintenance men were compelled to compromise on oil change "averages" recommended by engine manufacturers. This procedure is uncertain and costly. Fortunately, this operating conflict has been resolved with the introduction of a simple but completely reliable oil check system . . . the Shell ADC Oilprint Analysis.

The ADC Analysis was primarily conceived to determine proper oil change intervals for individual engines. However, it goes much further. It is capable of actually reducing engine maintenance costs by disclosing certain mechanical defects *before* they have caused serious engine damage.

The test procedure is very simple . . . requires little

practice to perfect . . . and provides a reliable check of oil from merely two drops of used oil. In minutes, the degree of Alkalinity, Dispersancy and Contamination can be determined easily.

Here are several typical examples from various areas of the country. They show how fleet operators, employing both diesel and gasoline engines, have successfully and profitably applied the ADC program.

A Kansas City Freight Line

Operating a large fleet of trucks, one Kansas City freight line previously had drained and replaced oil every 3,000 miles. After adopting the ADC Oilprint Analysis, individual test charts showed that, in most cases, drainage would not be necessary at less than 6,000-mile intervals. Even at this doubled interval, engine life was not affected. Further proof was established when these engines were inspected at 87,000 miles and no appreciable wear was found on bearings, pistons, rings or valves.

An Idaho Logging Operation

Oil had previously been drained after a limited number of hours of use on an Idaho company's diesel loco-



Substantial oil economy is realized in this tractor, because oil is changed only when indicated by the Oilprint.



Taking a quick "fingerprint" of crankcase oil from an interstate carrier.

tives. With the ADC Oilprint Analysis as a guide, the oil-change interval has now been safely increased manyfold. The savings made possible by this on-the-spot test in oil, filter change and labor costs were considerable. Furthermore, leaky head gaskets are frequently discovered before any serious engine trouble develops. Here is another valuable plus for the ADC Oilprint Analysis.

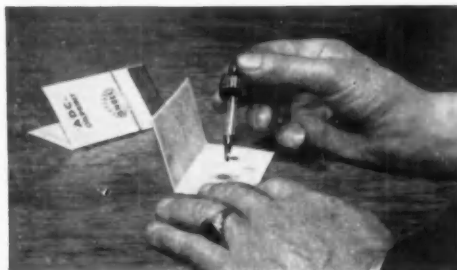
A Washington, D.C., Transit Company

This transit company operates a large fleet of buses with both gasoline and diesel engines in use. With the difference in operating schedules . . . rush hours, short and long hauls, around-the-clock schedules . . . both engine types were believed to require complete oil changes every 2,000 miles. When the ADC program was instituted, the tests showed that oil-drain periods and minor maintenance checks could be safely extended to every 3,000 miles for gasoline engines and 4,000 miles for diesel engines.

Fleet operators, who are concerned with extending the service of crankcase oil and avoiding the risk of using contaminated oil, are invited to sit in while a Shell service engineer demonstrates the time-and-money advantages of an ADC Oilprint Analysis program.



Photo shows an oil-spot test card . . . one phase in the visual life record of a change of oil.



One drop of a special indicator* fluid developed by Shell checks the alkaline reserve in the oil.

*Indicator Fluid U.S. Patent No. 2,770,530

SHELL OIL COMPANY

50 WEST 50TH STREET, NEW YORK 20, NEW YORK
100 BUSH STREET, SAN FRANCISCO 6, CALIFORNIA



Radio Systems

Continued from Page 119

dio on the job, and the same number of trucks proved ample to meet the need.

More Business

Profitwise, the radio that cleared up this confusion has paid itself in actual cash sav-

ings. Take a customer call-in for a pick-up, for example. Now the dispatcher gets the message right from the switchboard operator via Telautograph. A radio call to a driver in the vicinity quickly determines whether he has room for the load. If the answer is yes, the driver is on his way. If not, the dispatcher contacts other units and immediately dispatches the closest one as soon as it is available. Most important, business that was often turned away in

the rush is now added to the profit column.

Mileage savings have increased tremendously. The same radio dispatching that saves time by catching a nearby truck also saves a substantial amount of backtracking miles, enabling every truck to make more deliveries and pickups every day.

In the city, even experienced drivers sometimes have trouble finding an address, but with all of our drivers receiving the radio conversations, there is almost always one who will break in with exact instructions.

When radio was first suggested for our operation, I had to be convinced that the investment would be right from every standpoint. We needed radio, but I didn't rush in blindly. I contacted other operators and asked for their comments on the radio equipment they were using.

Teamwork Develops

As soon as radio was put to work, a new spirit of teamwork developed. The man on the route felt closer to the center of activity in the office. No longer was he off by himself. The dispatcher was virtually riding in the cab with the driver, helping him make decisions all day long. The increase in customer satisfaction and goodwill was evident right from the start. Our customer service is now the fastest and best in every area we serve.

In the more than two years since we started using radio, we have been on a constant expansion program. Radio has helped us all along the way. The need for our new terminal in Dallas, and a soon-to-be-completed terminal here in Houston, is due to increased business demands which stem directly from the better service we provide thanks to two-way radio communication.

END

Please Resume Reading Page 88

Slim 'N Greasy says: "About the only thing you can do on a shoe-string these days is trip."

 <p>INCREASE GAS MILEAGE</p>	 <p>REDUCE TRUCK MAINTENANCE</p>
 <p>LENGTHEN TIRE LIFE</p>	 <p>GUARD AGAINST ACCIDENTS</p>

By Equipping Your Fleet with
HANDY GOVERNORS



7616

KS
**KING-SEELEY
CORPORATION**

ANN ARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURER OF AUTOMOTIVE GOVERNORS

4000 Sealing Valve Core

8106B Trutest Special Gauge checks all other gauges

7188BH All-Purpose Service Gauge for all service needs

800 Sealing Valve Cap

Service package of 100 Schrader Caps

Service package of 100 Schrader Cores

Good fleet shop practice pays off with

GENUINE SCHRADER TIRE VALVES, CAPS, CORES, AND GAUGES

Most flats give ample warning for you to catch 'em in the shop. And keeping valves always capped and properly cored should be a must in your fleet's shop practice. Make it a rule to:

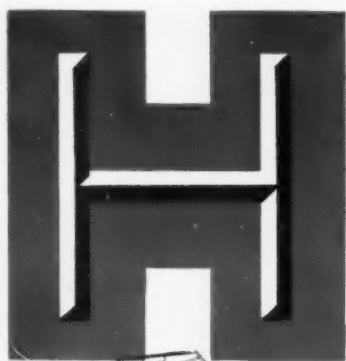
- 1 Specify genuine Schrader Tire Valves, Sealing Caps and Cores, which are guaranteed airtight even at 250 pounds pressure.
- 1 Keep stocked on Schrader Caps and Cores with handy service packages and see that every valve is always capped.
- 1 Gauge and record air pressures daily with genuine Schrader gauges to catch unusual pressure drops.

And, remember, Schrader Chucks, Couplers, Chuck Gauges and Accessories help airlines operate faster and better.

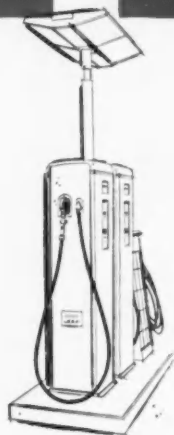
A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Company, Incorporated

Schrader
a division of SCOVILL

FIRST NAME IN TIRE VALVES
FOR ORIGINAL EQUIPMENT AND REPLACEMENT



with HIGHWAY



the payoff
is in



PERFORMANCE

HIGHWAY TRAILERS help keep ATLANTIC motorists "on the go"

Millions of eastern motorists know and trade at the famous Atlantic "sign of service." Because service is its business, The Atlantic Refining Company insists upon top performance from EVERY piece of equipment — from tire racks to the new fleet of Highway Trailer Clippers recently purchased to serve Atlantic stations.

Atlantic wanted trouble-free, low-maintenance trailers to deliver the goods under all conditions of load, weather, and run. They chose the Highway Clipper with all-steel stress-panel construction. Highway adds up to maximum load-carrying capacity and profitable operation over a long, dependable service life.

If service is YOUR business, check the big bonus you get in performance from Highway Trailers!

With Highway Trailers . . . the most important feature is PERFORMANCE!

HIGHWAY TRAILER COMPANY

HEADQUARTERS: EDGERTON, WISCONSIN

Manufacturers of: Commercial Trailers • Trailerized Tanks and Dry Bulk Haulers • Public Utility Bodies
Earth-Boring Machines • Pole and Cable Reel Trailers • Winches • Power Take-offs • Service Accessories
SALES AND SERVICE IN PRINCIPAL CITIES



A Division of
Marvitt-Chapman & Scott Corp.

Ne

MORE
This li
lbs.) hi
a pow
power i

LONGE
tests s
perform
ning, lo
petition



New B&D No. 300 Impact Wrench treats trucks like toys!



MORE POWER PER POUND: This light-weight (only 13 lbs.) high torque tool packs a powerful punch! Equal power in both directions.

LONGER LIFE! Torture tests show it has higher performance, cooler running, longer life than competition.



EASIER HANDLING: Pistol grip positioned to eliminate nose or tail heaviness. No starting torque twist. All-position auxiliary handle.

No. 100 IMPACT WRENCH: Ideal companion to the No. 300 for smaller applications. Both tools in your kit cover most bolt sizes.



**See it pour on brute power
for yourself . . . mail coupon today!**

Stop breaking your back trying to budge stubborn truck lugs! Mail the coupon today for a demonstration of how the new B&D No. 300 Heavy-Duty Impact Wrench brings more than 300 big ft. lbs. of torque to bear—spins rusted, dirt-encrusted lugs out in a breeze!

See why this new tool is really *power-built*! Patented armature construction; precision machined, heat-treated impactor and anvil; heavy-duty ball bearings throughout—this impact wrench is really tough, really durable. And it's fully reversible.

For a free demonstration or additional information mail coupon to: **THE BLACK & DECKER MFG. CO.**, Dept. 5409, Towson 4, Md. (In Canada: P. O. Box 278, Brockville, Ontario).



Leading Distributors Everywhere Sell



Black & Decker®
Quality Electric Tools—Power-Built to set the pace

MAIL COUPON FOR FREE DEMONSTRATION

THE BLACK & DECKER MFG. CO., Dept. 5409, Towson 4, Md.

- ☐ Please arrange a demonstration of your new No. 300 Impact Wrench.
☐ Send additional information.

Name Title
Company
Address
City Zone State

THERE'S A PERMATEX PRODUCT FOR EVERY MAINTENANCE NEED



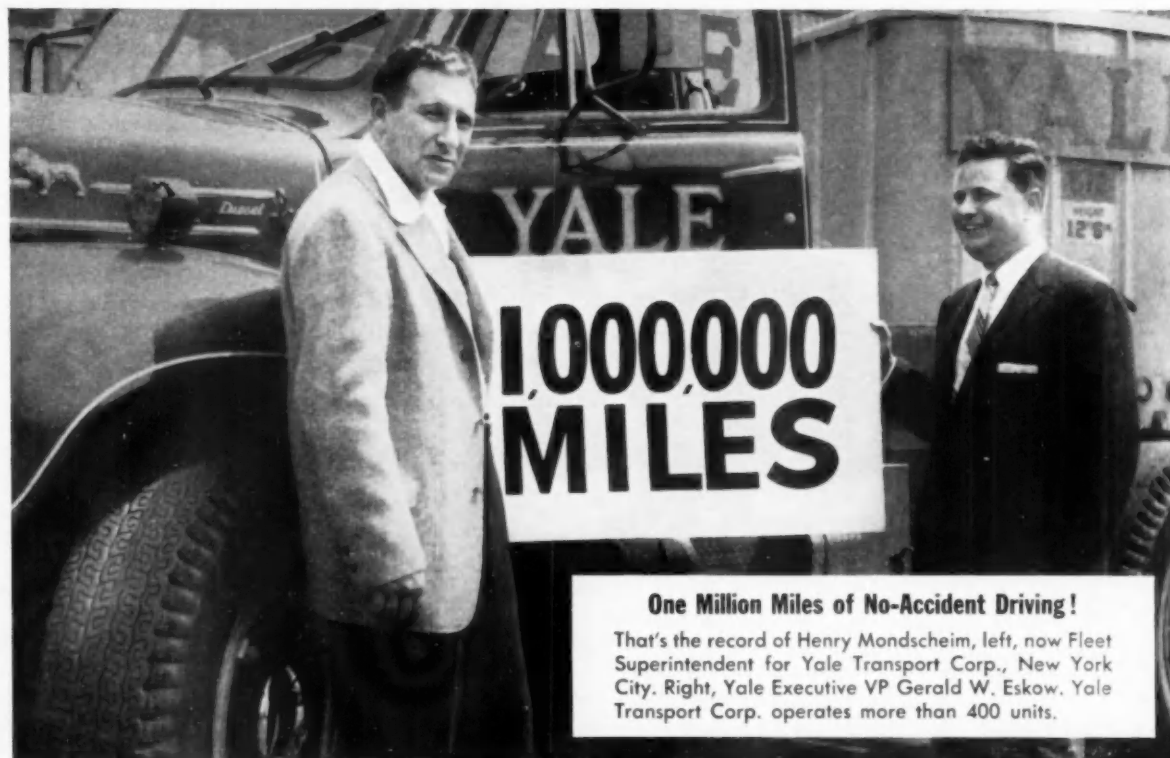
SEALING COMPOUNDS Form-A-Gasket No. 1 Form-A-Gasket No. 2 Form-A-Gasket No. 3 Super '300" Form-A-Gasket Pipe Joint Compound No. 51	
SEALANT-CEMENTS Stick-N-Seal Gasket Cement Glass Sealer Indian Head Gasket Shellac Compound	
SHOP REPAIR ITEMS Valve Grinding Compound Prussian Blue	
OILS & LUBRICANTS Penetrating Oil Solvo Rust Toon-Oyl Anti-Seize Compound Indian Head Clear Rubber Lubricant	
POLISHES & CLEANERS Blue-Blazes Silicone Cleaner-Polish Perma-Lustre Cleaner-Polish Acrylic Cleaner & Polish Taroff Car Wash Fabric Cleaner Windshield Cleaner Concentrate Chromium Polish	
COOLING SYSTEM PRODUCTS Block & Head Sealer Cooling System Cleaner & Conditioner Water Pump Lubricant & Radiator Anti-Rust Heavy-Duty Radiator Cleaner Radiator Sealer (liquid) Double Action Radiator Cement Indian Head Radiator Cement	
HYDRAULIC FLUIDS Knee Action-Jack-Shock Absorber Oil Hydraulic Jack Oil Heavy Duty Brake Fluid Moderate Duty Brake Fluid Automatic Transmission Fluid (Type A) Hudson Clutch Fluid Indian Head Hydraulic Brake Fluid	

PERMATEX COMPANY, INC.

General Offices: 300 Broadway, Huntington Station, N. Y.
 Factories: Brooklyn 35, N. Y., Kansas City 15, Kans.

"Million-Mile Safe Driver" Reports:

"We Never Knew Tires Could Make Such A Difference In How Our Men Drive — Till We Put On ARMSTRONG S-D's"



Yale Transport Diesel rigs now hold normal speed through what used to be 20 mile an hour areas — with safety and mileage both improved.

Can Armstrong Miracle S-D Tires cut route time? Yale Transport will tell you, yes! Will these tires win drivers' enthusiasm, step up safety, pile up extreme mileage? Ask Henry Mondsheim:

"These Armstrongs are the first tires all our drivers agree are far safer. Now they barrel through tricky stretches, knowing they can stop if they have to. They get more traction in rain and snow. Mileage is fine. Our high-torque Diesels burn up

some tires, but these Armstrongs have plenty of tread left at the 75,000 mile mark. Our men and our records say, we've never had any tires perform like these."

Armstrong's S-D tread (see diagram) is the first to win a U.S. mechanical patent in 18 years! It makes these tires "kiss the road" to give tremendous mileage — yet *grip* the road for real "stop and go". Run a test — learn, as Yale Transport did, how *different* a tire can be!

Exclusive interlocking sipes. Grip in all directions, yet "kiss" the road and leave it without fore-and-aft scuffing that is the main cause of wear.



Exclusive intratread bumpers. Keep tread open, yet prevent weaving under load or braking. Greatly reduce side-to-side scuffing.

ARMSTRONG ^{MIRACLE} S-D TRUCK TIRES

The Armstrong Rubber Co., Home Office, West Haven, Conn.

for you . . .

CLIP AND SAVE

magnus

CLEANING ENGINE & CHASSIS BY COLD PROCESS

Oil, grease, muck, dirt, etc., may be stripped from motor blocks and chassis by this cold process method, using **MAGNUSOL**:

DIRECTIONS:

For average conditions, dissolve one part of **MAGNUSOL** in 8 parts of kerosene or similar solvent. Paint or spray on surface and allow 10 to 15 minutes for thorough penetration. Then flush away with hot or cold pressure water rinse.

NOTE: Protect distributor, coil, starter and generator during spraying and rinsing. **Magnusol** is safe for all good paint.

DIRECTIONS FOR EXTREMELY DIRTY WORK:
Clean as directed, using **MAGNUSOL** in one part in six solution. If dirt is heavily caked, work in solvent with stiff brush.

DIRECTIONS FOR LIGHT DUTY CLEANING:
Clean as above using **MAGNUSOL** in one part to ten solution.

MAGNUS

The index card featured above describes the **MAGNUSOL METHOD** for complete cleaning of engine blocks and chassis . . . the unexcelled method which cuts cost . . . cuts labor . . . cuts time.

For additional information on this and other Magnus methods of automotive cleaning, write to Magnus, 38 South Avenue, Garwood, New Jersey.



AUTOMOTIVE DIVISION
MAGNUS CHEMICAL CO., INC.

magnus — a world-wide organization specializing in cleaning and protection of all surfaces.

Point System . . .

Continued from Page 69

Totals Set Needs

When vehicles are transferred from station to station, or when a new station is established, it is a simple matter to determine the number of mechanics needed at each station. The cards are sorted according to station and the point total for the station is determined. Dividing the point total by the average hours worked per week gives the number of mechanics needed.

Dowell adjusts in one of two ways for a fractional mechanic. For example, a station with a point total of 105 working a 40-hour week would rate two full-time mechanics plus five-eighths of a mechanic. The work load might be reduced by farming out automotive servicing to local dealers and having Dowell's mechanics handle only the auxiliary servicing, or one or two of the equipment operators who show mechanical aptitude may be set up as mechanics.

Station staff needs are reassessed every time equipment is transferred. Even an exchange of vehicles can greatly change a small station's needs. If a tank truck is removed, for example, but a pump unit is added, the total number of vehicles would be unchanged but the maintenance requirements could be as much as 20 per cent greater because of all the auxiliary equipment on the pumper.

Changing Assignments

Value of the point system can be seen in Dowell's current program of re-aligning maintenance assignments.

Basically, each local station is responsible for all preventive maintenance, adjustments, minor repairs and parts replacement for vehicles assigned to it. At division level, a larger base shop handled major repairs, rebuilding and modification of equipment. New units and company-developed equipment are assembled and built at the main shop in Tulsa, Okla.

(TURN TO PAGE 136, PLEASE)



**A
CONTINUING
REPORT**

**EVANS
HEATERS
ON
THE
JOB**

*These "Baby Chick Vans"
must have constant heat . . .*
EVANS TRUCK HEATERS
do the job!



Thousands of hours-old baby chicks stake their lives each winter day on the dependable, easily-controlled heat of Evans Truck Heaters. Hatchery owner Jack White, of Farmington, Iowa, started using Evans Truck Heaters to protect his fragile cargoes seven years ago.

Says Mr. White: "We had tried several different kinds of heating units, but we were losing many chicks due to heat failure. Then we tried Evans Truck Heaters—the same heaters we were using in our truck cabs—and our problems were over. The steady, well-ventilated heat of Evans Truck Heaters keeps our chicks alive and thriving through the coldest mid-winter temperatures."

Whether you need heaters for driver comfort or cargo protection, Evans Truck Heaters are designed to meet all your requirements. Each heater is centered around a heavy-duty, around-the-clock service motor; an exclusive one-piece, die-cast fan developed in Evans' laboratory; a rugged fin and tube-type core . . . all

merged into a compact unit that delivers high performance with low maintenance.

If you want additional information, or our heater catalog write Evans Products Company, Dept. Q-9, Plymouth, Michigan.

Regional Representatives: Cleveland, Frank A. Chase . . . Chicago, R. A. Lennox Co., Inc. . . . Detroit, Chas. F. Murray Sales Co. . . . Allentown, Pa., P. R. Weidner

**AN EVANS HEATER CAN BE DESIGNED
TO SOLVE ANY TRUCK HEATING PROBLEM**



EVANS PRODUCTS COMPANY also produces: railroad loading equipment; bicycles and velocipedes; Evanite hardboard; Evanite battery separators; fir lumber; and Evaneer fir plywood.

WHERE IT COUNTS

Prior SAFETY TANKS

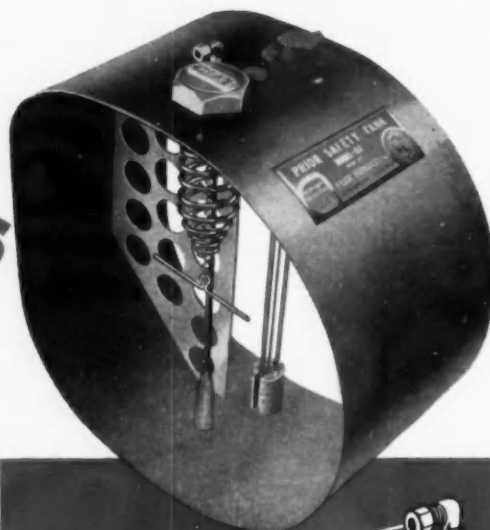
A cut-away view of a Prior Safety Tank illustrates the detailed precision with which Prior Tanks are engineered and manufactured... inside and out... where it counts as well as where it shows.

Continually leading the field in safety firsts has brought Prior to sales leadership in its field for Prior has pioneered many improvements and fundamental design changes now accepted and required by the industry.

Prior still maintains the most complete line of safety engineered fuel tanks, both diesel and gasoline, and offers the finest distributional facilities to sell and service their products.

Where time is such an important factor it is good to know that wherever trucks and trailers roll they are never far from a reputable distributor who stocks Prior products and parts.

PRIOR PRODUCTS, INC.
P. O. BOX 7608 • DALLAS, TEXAS



5 BIG FEATURES

- Prior removable fuel line, easily replaced from stock.



- Prior Tank Caps with ball bearing check vent.



- Safety Fuse Plug, separate from any removable part, to insure against explosion in case of fire.

- Monel Filter Tip to protect fuel line from clogging due to dirt and foreign materials.

- U.L. and I.C.C. approved.

Underwriters Laboratories, Inc.
INSPECTED
AUTOMOTIVE FUEL TANK
No. A-11498

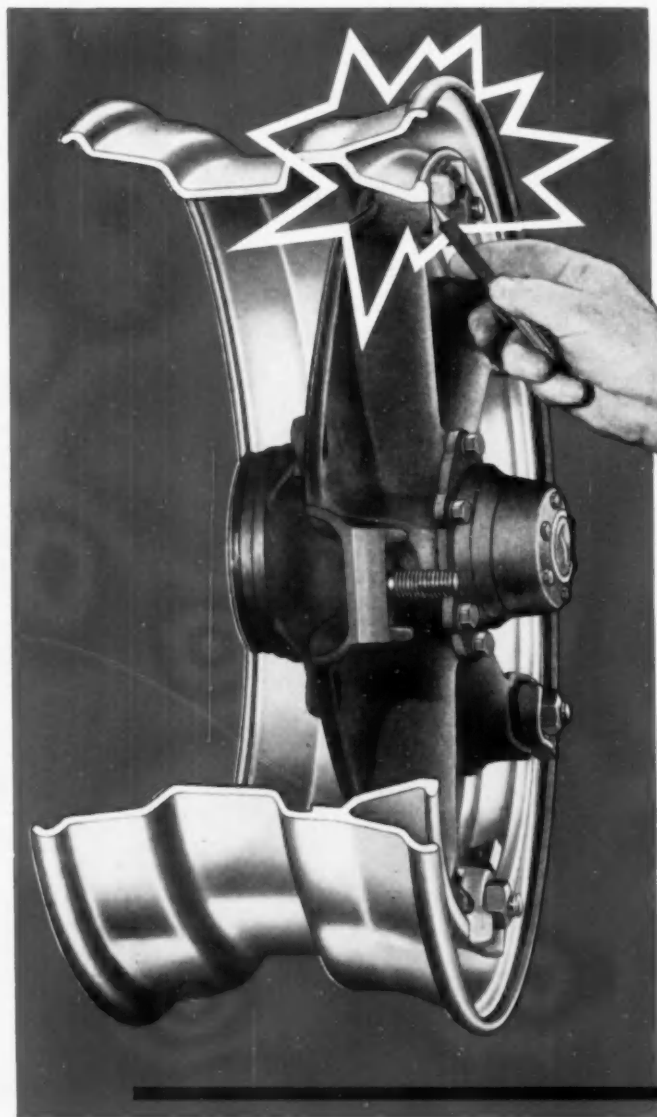
Meets I. C. C. Requirements for
Side Mounted Fuel Tanks
5 GALLON CAPACITY - 5% AIR SPACE ALLOWED

Fit is important in a hat...

...but it's more important in a rim because a poor fit results in **WHEEL WOBBLE**...



Only **Firestone** ^{One-Piece} **RIMS** HAVE POSITIVE LOCKED-IN ALIGNMENT



FIRESTONE demountable rims for tubeless truck tires will fit a cast wheel so snugly that there will be **NO RUN-OUT, NOR OUT-OF-ROUND** conditions. Now for the **FIRST TIME** Firestone's exclusive open-face* design allows sizing to an extremely close tolerance without distorting the tire bead seat.

The **INSIDE** diameter of the mounting ring is **PRECISION-PROCESSED** to **FIT** the outside diameter of the cast wheel. This revolutionary advancement **LOCKS** the rim and wheel together in perfect alignment... so snugly, in fact, that **NO SPECIAL CARE** is necessary in tightening the clamps, thus saving time and money. No other rim design **GUARANTEES** this positive locked-in alignment.

For greater **PEACE OF MIND**, specify **FIRESTONE** one-piece rims... they cost no more!

*Patent Pending

FIRESTONE
STEEL PRODUCTS CO.
AKRON, OHIO



bearings that meet the widest range of fleet engine applications

From light pick-ups to the heaviest tractors, there is a Federal-Mogul bearing *engineered* for top performance of each size and type of engine. Where light or medium loads are imposed on the bearings, tin-base or lead-base babbitt lined bearings are the economical, dependable "work-horses"

For newer engines, imposing heavy loads, bearings lined with sintered copper alloy are the answer, producing new standards of mileage and trouble-free operation.

Your Federal-Mogul jobber carries the complete line and gives prompt service.

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.



RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE



How to turn 18 Dayton Thorobreds into \$550 EXTRA PAYLOAD PROFIT

HERE'S HOW DAYTON TRUCK TIRES PAY OFF FOR YOU!

They're stronger, *yet lighter*—convert dead-weight into extra payload. A rig equipped with Dayton Thorobreds can haul 241.2 lbs. extra payload every trip. If your rig averages 80 thousand miles yearly, this additional payload—at 5.7c per ton mile—will earn \$550 extra for you every year.†

How does Dayton save you so much weight for extra payload? Tremendously strong Super Cordura Construction permits elimination of excess, heavy bulk. With full 12-Ply Rating, 8-Ply Dayton Tires save an average of 13.4 lbs. per tire—even more with new Dayton Tubeless Tires.

You *save money*, too, with Dayton Thorobreds. They give more miles on original tread and take more recaps. Best of all Dayton gives you these premium tire advantages at *regular* tire prices.

Make the most of new vehicles—have them factory equipped with Dayton Thorobreds. And call your Dayton Dealer today or write for the FREE illustrated booklet "Increase Your Profits 2 Ways." It tells how and why you can make more money when your fleet rolls on Dayton Thorobred Tires. The Dayton Rubber Co., Tire Division, Dayton 1, Ohio.

ATA CONVENTIONEERS

Be sure to join the fun at
THE DAYTON THOROBRED CARNIVAL
3rd Floor . . . Conrad Hilton Hotel.
Open all ATA hospitality hours



A Complete Line of Truck and Passenger Car Tires in Nylon, Super Cordura and Rayon

© D. R. 1957



Dayton Thorobred Tires

Point System . . .

Continued from Page 130

Base Shop Experiment

Two years ago, as an experiment, Dowell set up an independent base shop at Olney, Ill. Machine tools were moved from the former district shop at Flora nearby. The latter was reduced to a station shop only. Station shops adjacent

to the Illinois area were also stripped down, and their major repair and rebuilding work thrown into the Olney shop.

The Olney shop is directed by the District, with help from the staff at the General Office. Work goes through on a basis of need. Cost control has been tightened with charges properly made to stations served, since no work is being done on equipment assigned to a base station.

Consolidation at Olney resulted in a reduction of mechanics on base shop work in that area from 18 down to 14. At the same time growth of the company over the two-year period increased the amount of equipment processed by at least 10 per cent.

As a result of the success of the Olney experiment, three similar General Office-directed base shops are being established in areas of intense activity. Two are new shops at Oklahoma City and at Midland, Texas, while the district shop at Great Bend, Kansas, is being expanded.

These base shops are equipped for all major repairs and most rebuilding. Another benefit is that parts will be dispersed to a greater extent among the base shops than was true among the district shops. Since very many parts have been sent out of Tulsa by air express or air freight to more remote stations, this shortens the distance to where motor freight from the base shops will deliver parts as quickly, and at much lower cost.

With the point system, you can appreciate that it was relatively easy to revise the staff needs at the various shops as these changes were made.

NEXT MONTH: "PM Pays Off." Vehicles are only a small part of Dowell's maintenance program, but the complex and expensive auxiliary equipment needs lots of care. It gets it too, as you will discover in the next article in this series.

END

Please Resume Reading Page 70

HACKNEY BODIES ARE BUILT TO TAKE IT...

What you can't see is the most important part of your refrigerator body



Like the Rhinoceros, Hackney Bodies are built to take it. All-steel framing, electrically welded and strongly braced; stout Cypress sub floors, heavy duty steel door frames and jambs, heavy duty bumpers, spring steel side bumpers and steel or aluminum exterior panels are the backbone for the long, rugged life of Hackney Bodies.

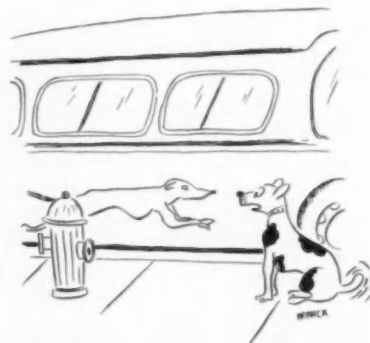
Even when overturned they'll take the stress and strain, coming up ready to continue in service.

Ask us to give you all the facts and the reasonable prices on our refrigerator and insulated bodies.



Your per-year-cost of Hackney Bodies is bound to be less

Hackney Bros. Body Co.
Wilson, N. C. Phone 7-0105



"Give somebody else a chance!"

5 seconds and another perfect regrind job with Thor's valve seat grinder



Here's why

• Cushioned contact

Thor spring-loaded wheel holder eases the wheel onto the work at full speed . . . lifts it instantly to prevent marring the surface when the work is done. It's automatic—it's exclusive with Thor!

• A "new" wheel holder in 5 minutes!

Yes . . . exclusive Thor design permits low cost on-the-job replacement of pilot sleeve (or hex driving socket when required). Gives you a new wheel-holder for an investment of five minutes and a few dollars.

Ball thrust bearing and large roller bearing give endless service, never need replacement.

You can't overload a Thor Driver—costs no more than ordinary drivers, but delivers more power than you can ever use on automotive valve seat grinding. Weighs only five pounds. Thousands in daily use. Complete equipment, fast service on pilots, wheel holders, wheel dressers and kits. See your Thor jobber. Thor Power Tool Company, Prudential Plaza, Chicago, 1, Illinois.



THOR POWER TOOL COMPANY • CHICAGO

Branches in all principal cities

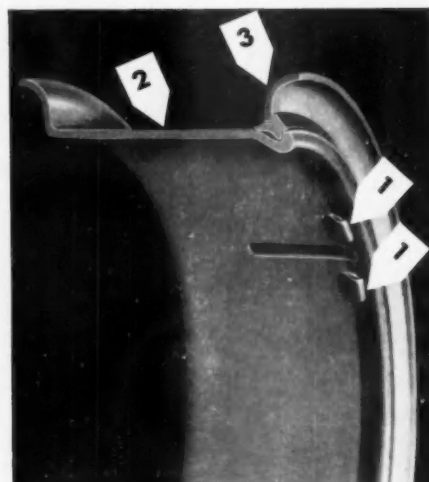
Announcing Cleve-Weld's new Lightweight Rim!



Built by men with 45 years of experience in the problems of fleet operators, the New Cleve-Weld Lightweight Rim is designed to set and maintain new standards in truck rim performance! You'll save on original installation costs, earn by reduced unsprung weight, keep rolling safely and surely.

Three-way reduction in rim weight:

1. **"Extra-Metal" drive plates now "Same-Metal"**
Cleve-Weld engineers make two simple depressions in rim base do work of bulky "forged" drive plates.
2. **Rim Base re-engineered for lightness**
Excess metal is strategically shaved off the rim base! Rim is lighter in weight without loss of safety or efficiency.
3. **Side-Ring reduced in thickness**
We've engineered this section without loss of efficiency, eliminating more unsprung weight for you.



The New lightweight rim from Cleve-Weld offers you these immediate benefits:

- | | |
|---|---|
| 1. Significant savings in original installation costs starting with your first order. | 3. Safe, sure roadability under any road conditions. |
| 2. More earning power per truck due to less unsprung weight per rim. | 4. Minimum time lost during tire changes with easy-handling rim components. |

Write us today or see your parts and service suppliers
to get the full story on the new Cleve-Weld Lightweight Rims.



CLEVELAND WELDING DIVISION
AMERICAN MACHINE & FOUNDRY COMPANY
Cleveland 11, Ohio

Records of 400-unit fleet prove Gates "T" Belts cost less per mile



Mr. Leonard Genser, President, says: "I am pleased to state that Gates "T" Belts have proved to our complete satisfaction that they cost less per mile. They outlast any other belts we have ever used, and have practically eliminated costs of road calls due to belt failures."



Genser Trucking Company of New York City operates more than 400 units in the New York-New Jersey-Connecticut area, and its maintenance records prove definitely Gates "T" Belts cost less per mile.

Make this test:

Call your nearby Gates jobber and have a Gates Specialist deliver a trial order of belts for your own on-the-job comparison test. Match the service life and cost-per-mile of Gates "T" Belts against any you have ever used.

The Gates Rubber Company
Denver, Colorado



World's Largest Maker of V-Belts

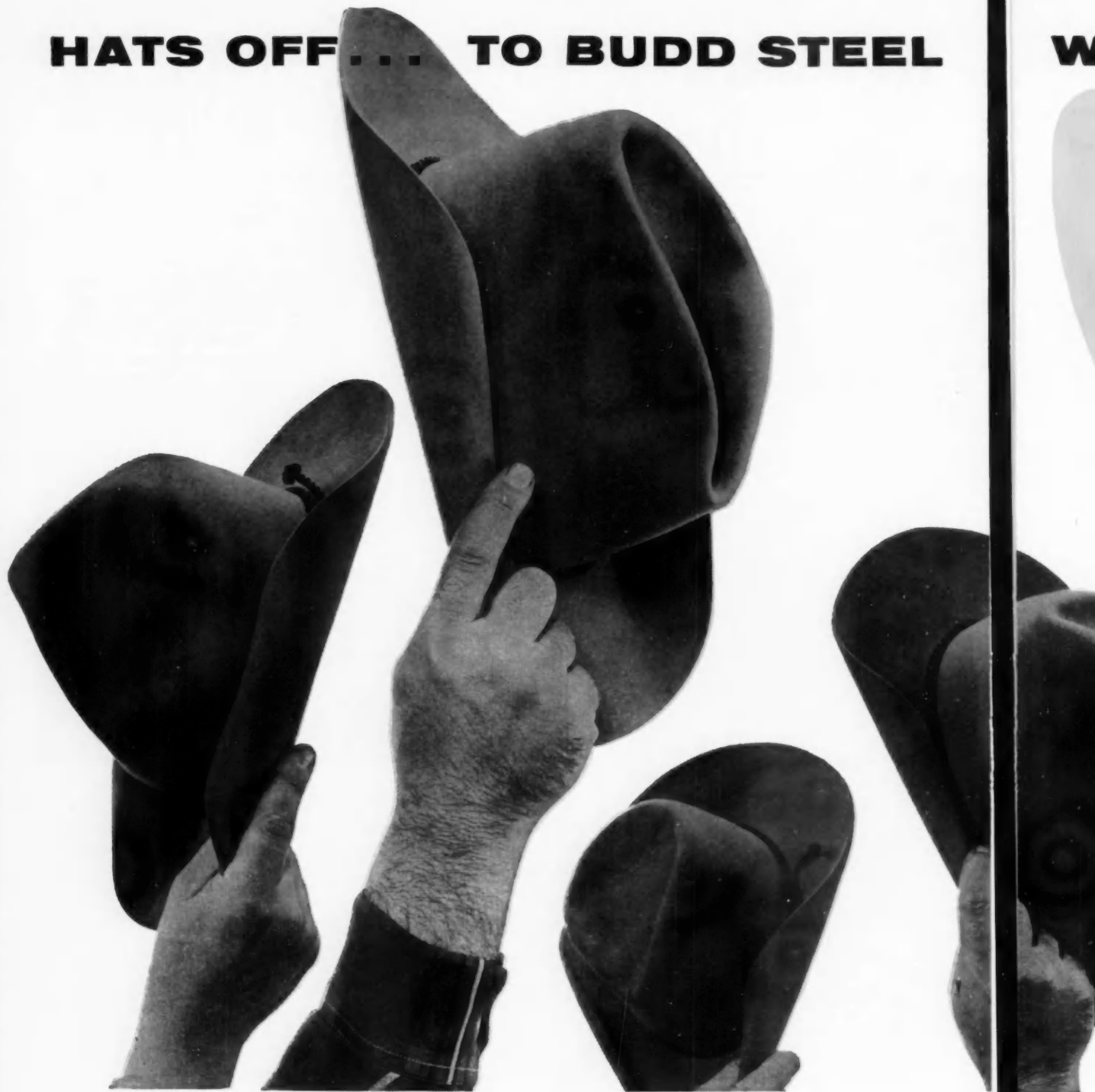
Look
for this

"T"

on both the belt and the label. It is your assurance of the belt specially engineered for trucks and busses — the belt with a tough flexible cover and cords of extra high tensile strength.

GATES TRUCK & BUS V-BELTS

HATS OFF... TO BUDD STEEL



NATIONWIDE SERVICE

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels, Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ATLANTA—John A. Harris & Son, Inc.
BALTIMORE—Standard Wheel & Rim Co.
BIRMINGHAM—Wheel, Rim & Parts Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Frey, the Wheelman, Inc.
CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAYTON—Stone Wheel & Rim Co.
DAYTON—Rim & Wheel Service, Inc.

DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Co., Inc.
FARGO—Wheel Service Company
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel, Inc.
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southeast Wheel & Rim Co.
KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—John A. Harris & Sons, Inc.
LANCASTER—Standard Wheel & Rim Co.
LOS ANGELES—Wheel Industries, Inc.

LOUISVILLE—Auto Wheel & Rim Service
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Aring Equipment Co., Inc.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.
NEW YORK—Wheels, Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
OMAHA—Omaha Rim & Wheel Co.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Kay Wheel Sales Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.

WHEELS

Western fleet owners have a story to tell fleet operators coast-to-coast.

Out West, where long hauls, full loads and top speeds are normal operation, the Budd steel wheel has earned its reputation for safe, dependable, economical service.

Out West, fleet owners praise and use Budd's low-priced, lightweight, life-of-the-vehicle steel wheels for all types of operation . . . over-the-road and off-the-road.

Budd, then, is the name to remember if you own or operate a fleet . . . West or East.

Considering tubeless? Budd has a complete line of roadtested economical tubeless wheels which are completely interchangeable with conventional equipment.

The Budd Company
Detroit 15



PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robblees', Inc.
PROVIDENCE—New England Wheel & Rim Co.
RALEIGH—Carolina Rim & Wheel Co.
RICHMOND—Dixie Wheel Co., Inc.
ROCHESTER—Frey, the Wheelman, Inc.
SALT LAKE CITY—Henderson Rim & Wheel Service
SAN ANTONIO—Southwest Wheel, Inc.
SAN FRANCISCO—Wheel Industries, Inc.
SEATTLE—Six Robblees', Inc.
SOUTH BEND—Wire & Disc Wheel Sales & Service
SOUTH BEND—Wheel & Rim Sales Co.
SPOKANE—Bearing & Rim Supply Co.
SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.
SPRINGFIELD, MO.—Borbein, Young & Co.
ST. LOUIS—Borbein, Young & Co.

ST. PAUL—Wheel Service Co.
SYRACUSE—Wheels, Incorporated
TACOMA—Six Robblees', Inc.
TOLEDO—Wheel & Rim Sales Co.
WICHITA—Borbein, Young & Co.
WINSTON-SALEM—United-Automotive Service

EXPORT

CLEVELAND, OHIO—C. O. Brandes, Inc.
4900 Euclid Avenue

CANADA

CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
MONTREAL—Auto Wheels & Supplies, Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire & Auto Supplies, Ltd.

Fleet Courses

HERE is an up-to-date calendar of fleet training courses for 1957. For complete addresses to write to for further information about the courses listed, see the Fleet Course Directory appearing in the November, 1956, issue, page 314.

Driver Training

North Carolina State College—One month long courses begin Sept. 30, Oct. 28, Nov. 25.

Fleet Maintenance

University of Oklahoma—Sept. 16-19.
Rutgers University (N. J.)—Sept. 30-Oct. 4.
University of Alabama—Oct. 7-11.
Purdue University (Ind.)—Oct. 14-18.
Oregon State College—Nov. 5-7.
Michigan State University—Nov. 18-22.
University of Kansas (course will be held in Kansas City)—November.

Fleet Supervisor

Purdue University (Ind.)—Sept. 16-20.
Georgia State College of Business Administration—Oct. 7-12.
University of Virginia (course will be held in Roanoke)—Oct. 7-12.

Terminal Management

Pennsylvania State University—Sept. 30-Oct. 1.

Top Management

Northeastern University (Mass.)—Oct. 15.
University of Alabama—Oct. 17-18 (tentative).
University of Kansas—October.
Tulane University (La.)—November (tentative).

Fleet Operation

Fleet Operation courses usually meet one night a week for about 10 or 12 weeks. Starting date, where known, is indicated below. City shown in parenthesis is where course will be held.

Patterson Vocational School (Dayton, Ohio)—Sept. 12.
University of Connecticut (Hartford)—Sept. 14.
University of California (San Diego)—Sept. 24.
University of Utah (Salt Lake City)—Sept. 30.
University of Tennessee (Nashville)—Sept. 30.
University of Kansas (Wichita Falls)—Sept. 30.
University of Arizona (Tucson)—Oct. 3.
Tomlinson Vocational School (St. Petersburg, Fla.)—Oct. 7.
Sanford Vocational School (Sanford, Fla.)—Oct. 8.
No dates have been set for the following locations.
University of Toledo (Toledo, Ohio).
Rochester Institute of Technology (Rochester, N. Y.).
University of California (Berkeley).
University of California (Fresno).
University of South Carolina (Columbia).

**Takes less swing
...TO GET A BITE**

New, Improved BONNEY 92-Tooth Ratchet

- **LESS THAN 4° ANGULAR MOVEMENT** required for a good bite...eases work in close quarters.
- **FINGERTIP REVERSING ACTION**
- **ON-THE-JOB REPAIRING** with exclusive Bonney pre-assembled replacement kit.
- **AVAILABLE IN BOTH** Bonney and Bon-E-Con in ¼", ⅜", ½" and ¾" square drives; and 1" Bonney.
- **ONE DESIGN FOR ALL SIZES** Every ratchet in the complete line has all these features.



This new, improved 92-tooth ratchet speeds up hard work in close quarters. Made of finest steel. No die-cast parts. Call your Bonney jobber today and ask him about this all-new ratchet.



BONNEY FORCE & TOOL WORKS • ALLIANCE, OHIO



Best Buy in Tire Chains

BE PREPARED . . .

CARRY A SET IN EVERY TRUCK

1. They stop you shorter, straighter, safer
2. They provide best possible traction on ice or snow . . . keep you moving all winter long
3. They wear over twice as long as non-reinforced chains

*for safety, performance, economy . . .
insist on*

WEED V-BAR TIRE CHAINS

In Business for Your Safety

ACCO



**AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE**

York, Pa., Boston, Chicago, Denver, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, Ore., San Francisco, Bridgeport, Conn.

**WEED
TIRE CHAINS**

**REO V-8
EXCLUSIVE!**

**OIL TEMPERATURE
STABILIZER**

holds oil to within 35° above engine coolant. Acts as oil heater for quick warm-ups in winter. Cools oil in summer. This automatic "climate" control means longer oil and bearing life.

**REO V-8
EXHAUST VALVES**

are sodium filled for quick cooling. Valves and seats are Stellite faced for rugged resistance to scorching heat. Positive rotation insures longer life . . . maximum efficiency.

**REO V-8
CRANKSHAFTS**

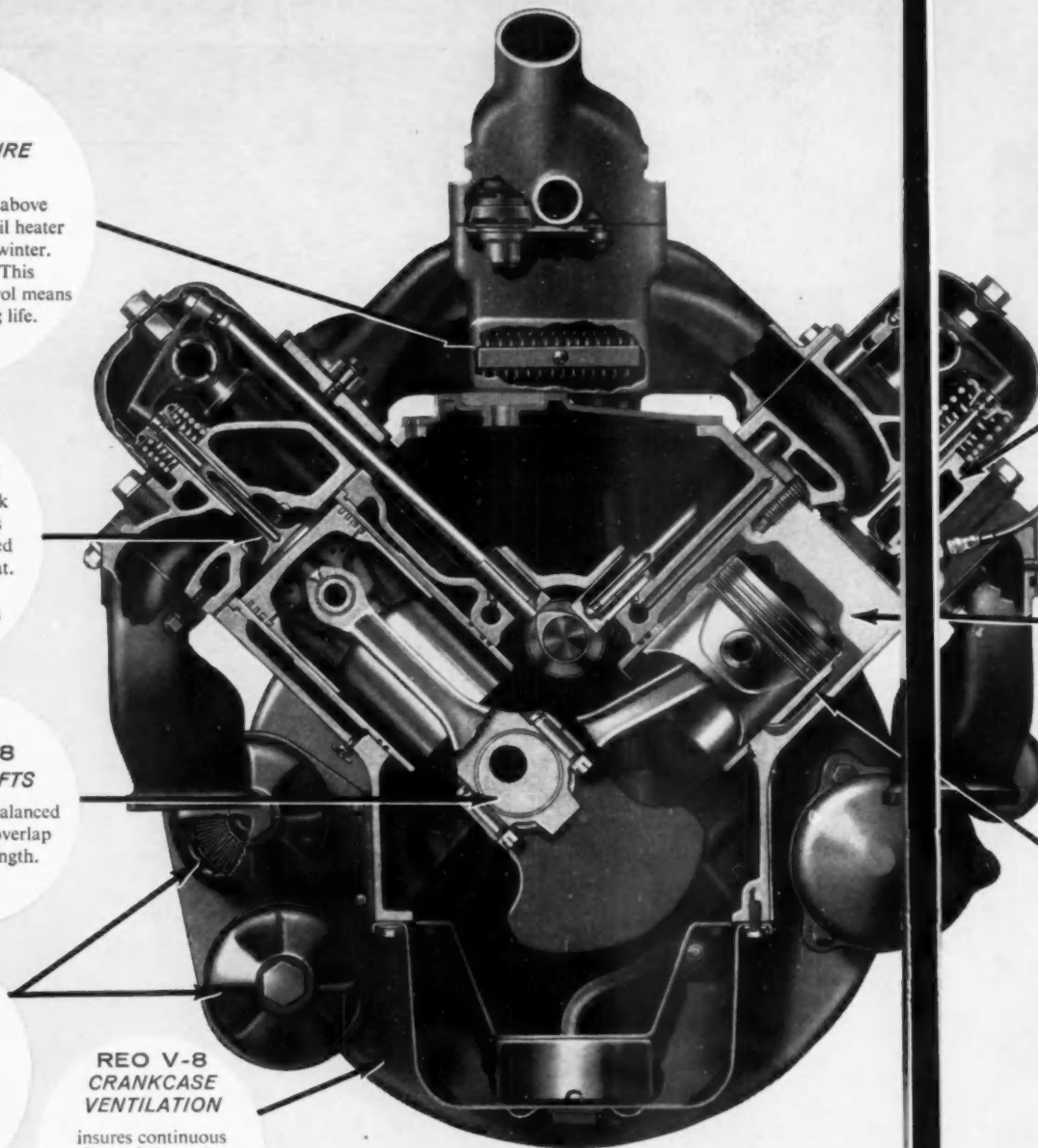
are fully counterbalanced with maximum overlap for rugged strength.

**REO V-8
EXCLUSIVE!
DUAL OIL FILTERS**

clean all the oil all the time. By-pass and full-flow filtering action means cleaner oil longer . . . less wear, less friction. Reo V-8's have cleanest oil possible in any truck engine.

**REO V-8
CRANKCASE
VENTILATION**

insures continuous flow of clean air. Removes corrosive crankcase vapors . . . minimizes harmful sludge.



beneath the

*there's a
big difference
in power!*

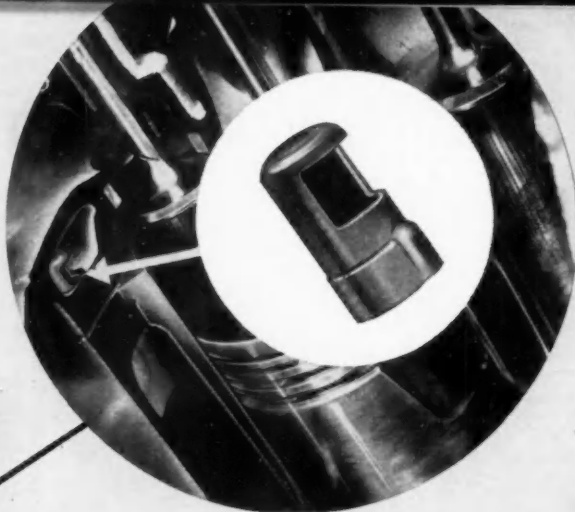
REO V-8 Gold Comet power on your job adds up to more road power *at the wheels where it pays off*. Lively, economical, efficient power . . . up to 45% more efficient than comparable engines of even greater displacement* . . . and at *governed* engine speeds.

What's more, Reo power has almost unlimited working life. Its "wet-sleeves" make any number of overhauls practical, eliminate re-boring and re-fitting and cut downtime and maintenance cost, in half.

If you're looking for more power for longer life for lower operating costs—be sure a Reo V-8 is "**beneath the bonnet**" when you buy!

*ask us to prove it!

R
TH



**REO V-8 EXCLUSIVE!
HIGH VELOCITY COOLING**

circulates over 100 gallons coolant per minute (at 3200 rpm) around *full-length* of piston travel. Special jets direct coolant around exhaust valves and spark plugs. No hot spots possible.

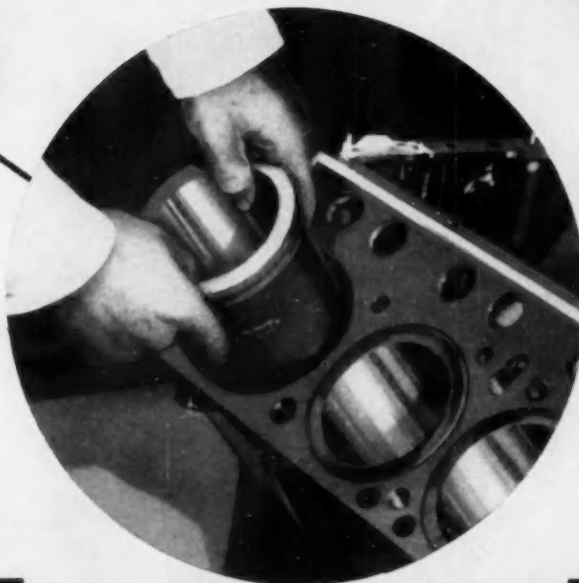
REO V-8 SHORT-STROKE

cuts piston travel . . . friction . . . power loss. Saves up to 73 miles of piston travel per every 300 road miles (at 50 mph). Reduction of wear and drag means more wheel power.



**REO V-8 EXCLUSIVE!
REPLACEABLE "WET-SLEEVE" CYLINDERS**

precision fitted sleeve-and-piston assemblies install in half the time and cost of re-boring conventional V-8 engines. No re-boring or piston fitting required.



"bonnet"

Gold Comet V-8
207 and 235 h.p. Gas.
(220 h.p. LP-Gas)

Six Cylinder Gold Comets
up to 170 h.p. Gas.
(up to 160 h.p. LP-Gas)



REO DIVISION LANSING 20, MICH.
THE WHITE MOTOR COMPANY

"With SOLEX® in my cab, I don't get bushed anymore,"

says **Chester Hudson,**
driver for
Roadway Express, Inc.

Take a close look at Chester Hudson, driver for Roadway Express Inc., Akron, Ohio. He has just rolled in from a 300-mile run, yet he's clear-eyed and relaxed.

Mr. Hudson explains this freedom from fatigue: "You know, I just don't get bushed on a 300-mile trip like this anymore. The Solex Glass in my cab takes away eyestrain. There's not that glare and straight heat coming in on you as you drive into the sun. I'm a lot more alert all the way on a trip, and it's bound to be safer when you're more alert."

Solex Safety Glass cuts down the solar heat and glare entering the cab . . . makes driving easier and safer. Give *your* drivers this added comfort and safety by specifying Solex for new equipment and as a replacement in your present trucks.

Solex is available in the well-known types of Pittsburgh Safety Glass—Duplate® and Duolite®—as well as in Herculite® and conventional plate glass. For more information, write to Pittsburgh Plate Glass Company, Room 7238, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.

SOLEX® "the best glass
under the sun!"



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



In diesel engine overhaul...

"Never any trouble with Clevite 77"

Mr. Wallace H. Yost,
Partner-Owner



The Diesel Service Unit Company, Portland, Oregon, has specialized in engine rebuilding since 1945. During this time, overhaul work has been performed on every conceivable type of equipment powered by diesels.

An interview between Mr. Wally Yost, partner-owner of Diesel Service, and Mr. Dale Huff of The Cleveland Graphite Bronze Co., brings out some interesting observations on the performance of Clevite 77* engine bearings. We believe you will find highlights of this discussion impressive.



Q Mr. Yost, will you briefly outline the type of service you perform?

A We are primarily diesel engine rebuilders. I would say we overhaul an average of 200 engines a year.

Q Does your business come from any specific region?

A Mainly Oregon and southwestern Washington. Approximately a 350 mile radius.

Q What operating conditions do diesels encounter in this area?

A From sea level to 7000'. Temperatures from 30 below to 110°.

Q What do you recommend as standard engine bearing maintenance practice?

A Once an engine is out of the frame, we recondition the shaft if the journals are out .001" or more. If the engine is in the frame and the shaft is smooth, we prefer to limit the out of round and taper to .002".

Q In order of preference, which brands of bearings do you use?

A We use only one brand . . . Clevite 77.

Q Why did you start using Clevite 77?

A As we were tearing down engines for overhaul or repair, Clevite 77 bearings were always in much better condition than other bearings. We noticed some engines with two different brands, and Clevite 77's were always in better shape. They looked like new compared to other bearings.

Q How long have you been using Clevite 77?

A Five Years.

Q In addition to what you said earlier, are there any other reasons why you've standardized on Clevite 77?

A Previously we pulled engines down to check bearings; now we pull them because of excessive blow-by, oil consumption or some trouble other than bearings. We never have trouble with Clevite 77.

You, too, will find the patented tri-metal construction of Clevite 77 provides greater fatigue strength, corrosion resistance and a superior running surface.

Where load and operating conditions require engine bearings with high-duty stamina, there's nothing better than Clevite 77*. See your nearby N.A.P.A. jobber for the complete Monmouth* bearing line.

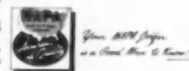
*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

The Cleveland Graphite Bronze Co.
Division of Clevite Corporation
Cleveland 3, Ohio, U.S.A.





Some of Sexton's trucks line up at the main terminal in Chicago.

John Sexton & Company, the largest **RAYON CORD**

Sexton Quality Foods services hotels, restaurants and institutions. On the average its trucks cover 1,700,000 miles yearly. There are 14 tractors, 24 trailers and 150 smaller trucks in all. Almost 100% of these ride on RAYON CORD TIRES.

Why such overwhelming reliance on Rayon?

GREATER MILEAGE—Sexton has found that Rayon Cord Tires *pay off* in greater mileage—average original mileage is 80,000 with an average of three recaps per tire. Each recap averages 65,000 miles.

LESS DOWN-TIME—Sexton has found that Rayon Cord Tires *pay off* in less down-time loss. This is important in food service where on-time deliveries must be met.

LOWER INVENTORY—Sexton has found that Rayon Cord Tires *pay off* in lower tire inventory. Sexton reports a figure of less than 1%.

Over the years Sexton has found it more profitable to turn over the care and maintenance of tires to an outside service—the Hoppe Company of Chicago.

Quality

food

T

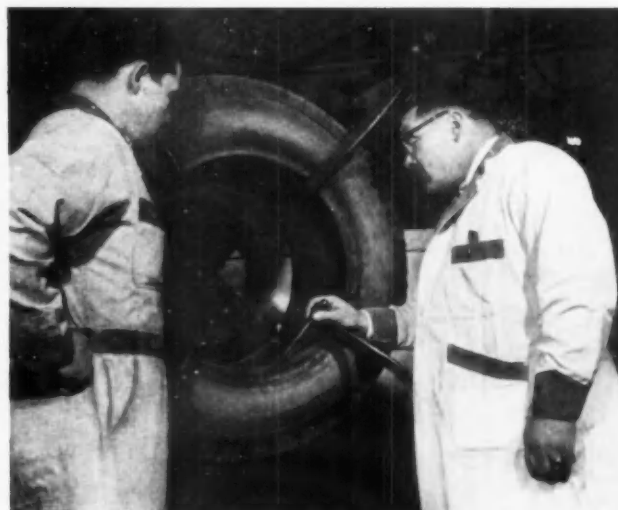
Tires are
condition
balancing
managing
pany also
new tires

Frank
to say a
tires, b
recapping

COMM



Hap Goddard (left) of the Hoppe Company inspects a tire at the Sexton Garage.



Here at the Hoppe Company Garage, Mr. Goddard (right) checks a tire that has just been recapped.

food service in America, proves

TIRES PAY OFF!

Tires are checked weekly for air pressure, wear, overall condition, matching, front-end wheel alignment, wheel balancing under the supervision of Hap Goddard, manager of the Hoppe Company. The Hoppe Company also handles recapping for Sexton and supplies new tires.

Frank Luzzo, purchasing agent at Sexton's, has this to say about Rayon Cord Tires: "Rayon adds life to tires, brings economy to fleet operation and makes recapping possible and profitable."



Records show that more truckers use **RAYON CORD TIRES** than any other. They can rely on Rayon because Rayon pays off!

AMERICAN RAYON INSTITUTE, INC.
350 Fifth Avenue, New York 1, N. Y.

Manufacturers' Literature

(See Page 44 for Fleetman's Library)

Complete addresses are given for your convenience in writing for copies of the publications reviewed here. Ask for them by title and number.

Alkaline Rust Remover, Form No. A-14A. Describes Turco's non-acid

rust remover for rust, paint, primer. Free, 4-page folder from Turco Products, Inc., 6135 South Central Ave., Los Angeles 1, Cal.

Erectomatic Steel Shelving, Form No. 2279. Lists numbers of models available, size specifications and special features. Free from Director of Advertising, Standard Pressed Steel Co., Box 747, Jenkintown, Pa.

Malsbary Service Center Directory. A list of 175 authorized Malsbary steam cleaner service centers in U. S.

and Canada. Free from Malsbary Mfg. Co., 845 92nd Ave., Oakland 3, Cal.

Allen Automotive Electrical Specifications, Automotive Tune-up Specs and Coil Test Specs for 1957. Electrical specs includes distributor, generator, regulator and cranking motor specs for American passenger cars, trucks and tractors, 1950-57. Tune-up specs are for use with Allen Uni-Tuner, Power-Tuner, D-T-Vee and Distribution. Coil tests specs are for use with Allen E-309 coil and winding tester and E-403 coil-condenser tester. Specs are \$1.50 from Allen Electric & Equipment Co., 2101 N. Pitcher St., Kalamazoo, Mich.

"Low Heat Input" Process Overcomes Industry's Aluminum Joining Problems, Form No. TIS 2813. A 6-page technical bulletin describing metal joining and repair processes peculiar to aluminum. Free from Technical Information Service, Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing 58, New York, N. Y.

DeVilbiss Service Manual. Contains full parts list and general information on installation, operation and maintenance on paint spray equipment in 405 pages. Price is \$2.50 from The DeVilbiss Co., Toledo 1, Ohio.

Choldun 'Magic Heart' Steam Cleaner Catalogue. Describes Choldun's coil system said to resist clogging, corrosion and wear because chemicals do not flow through them. Six-page booklet is free from Choldun Mfg. Corp., 336 East St., New Haven, Conn.

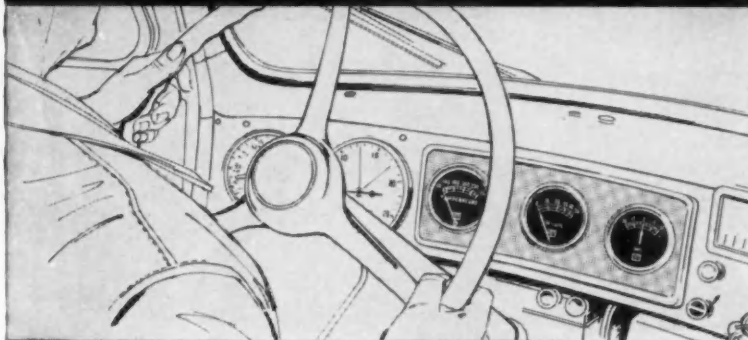
Case History on Armeo-Built Freight Terminal, Form No. SX-9957. Describes Merchant's Fast Motor Lines, Abilene, Texas, dock and modern office built from Armeo prefabricated steel units. Free from Armeo Drainage & Metal Products, Inc., Product Information Service, Middletown, Ohio.

Kysor Protectostat Assemblies, Bulletin No. 111. Describes how unit disengages air clutch, grounds magneto and blows signal whistle when low lubricating oil pressure or high engine temperature occurs. Free from Kysor Heater Co., Cadillac, Mich.

Warner Electric Brake System Brochure, Form No. WEB 3258. Describes brake principles and gives (TURN TO PAGE 155, PLEASE)

ACCURACY HERE...
can save costly engine damage!

INSTALL STEWART-WARNER
Universal Mounting Gauges



for trucks, busses, cars!

- Rugged vibration-proof mechanism!
- Dust-tight, water-proof, corrosion-resistant construction!
- Chrome bezel rolled over rubber gasket!
- Silicone damped pointers—no bounce or flutter!
- Ample safety factor—will not take a "set" when overloaded!

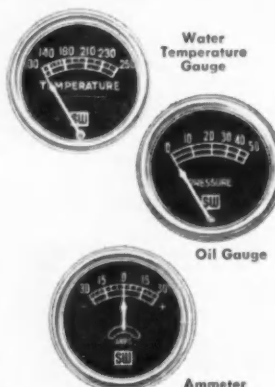
There is a famous-quality Stewart-Warner instrument or gauge for every automotive need—to give dependable warning indications *before* oil drains away, *before* coolant boils off or fuel runs out . . . *before* countless other engine troubles cause costly damage.

See your dealer for complete details, or write:

STEWART-WARNER

Instrument Division

Dept. UU-97, 1840 Diversey Parkway, Chicago 14, Illinois

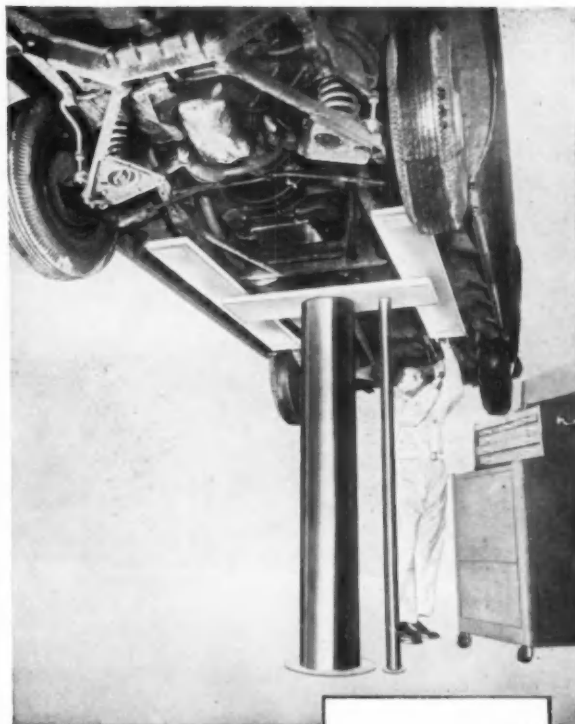


FASTEST WAY TO INCREASE SERVICE PROFITS . . . SPEED REPAIRS

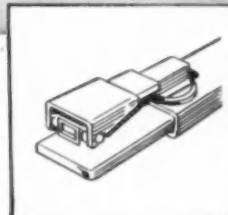
REDUCE TIME BY 33 TO 54% WITH **GLOBE** *"Frame-Kontakt"* **HOISTS**

Studies prove that 75% of all service operations can be done easier, faster, and more effectively when using a Globe "Frame-Kontakt" Hoist. Mechanics work more comfortably and efficiently standing up, with all tools and equipment readily available. The entire underbody of the car is easily accessible on a Hoist . . . lubrication is more effective. Jobs roll in and out more quickly . . . customers appreciate the speedier service.

You can actually realize time savings of 33% to 54% using Globe Hoists for service operations. For example, you save half the time needed to remove and replace a muffler . . . one-third, on a gas tank operation . . . almost half, on the removal and replacement of automatic transmissions, over half the time on standard transmissions. Get more information on profit-making Globe "Frame-Kontakt" Hoists.



Globe "Frame-Kontakt" Hoist is ideal for lube and brake work, tire repair, inspection, and general service work. New "Continental" Adapter fits all makes, all sizes of cars.



GLOBE
THE BEST LIFT
HOISTS

PLANTS: DES MOINES • PHILADELPHIA • LONG BEACH, CAL.

The world-famous principle of "Frame-Kontakt" lifting was invented, patented, pioneered, and licensed by Globe Hoist Company. It is covered by U.S. Patents: 2458986 - 2593630 - 2583635 - 2612344 - 2612355 - 2654443. Other U.S. and Foreign Patents issued and pending. In addition to the above, fifty-six other patents mark Globe's leadership in the automotive lift industry.

MAIL THIS COUPON TODAY!

GLOBE HOIST COMPANY CCJ-746M-FKH(1)
East Mermaid Lane at Queen Street,
Philadelphia 18, Penna.

Please send me detailed, illustrated specifications on Globe "Continental" Hoists.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____



FRAME-KONTAKT HOISTS
SINGLE POST



TWO POST



FREE WHEEL TYPE
AUTO HOISTS



ROLL-ON TYPE
AUTO HOISTS



TWO POST
AUTO HOISTS



TWO POST
TRUCK HOISTS



FOUR POST ELECTRIC
AUTO HOISTS



WHEEL
DOLLY



TRANSMISSION
DOLLY

WORLD'S MOST COMPLETE LINE OF AUTOMOTIVE AND HEAVY-DUTY TRUCK HOISTS

To guarantee optimum



**J-M Four-Star
Brake Blocks are
identified by these colors:**

Style No. 2500

Colored red to denote
high friction range



Style No. 2100

Colored green to denote
low friction range



Style No. 2300

Colored yellow to denote
medium friction range



JOHNS-MANVILLE

brake performance, use . . .

J-M "Color-Coded" Brake Blocks

New J-M Brake Advisory Service promises
Fleet Operators maximum mileage at minimum cost

Here's a packaged maintenance program you can adopt immediately to help cut costs and get better brake performance at the same time.

It's the Johns-Manville Brake Advisory Service . . . a plan especially designed for Fleet operators. It embraces a study of your operation by field sales engineers, a recommendation of materials carefully selected on the basis of analysis of the problem, and, foolproof schematic color sketches to guide your mechanics in following the specific recommendations you will receive for each vehicle.

How the plan works

Here is the easy way to make sure that the Brake Blocks you use are *correct* for every vehicle in your fleet:

Just call on the J-M Advisory Service. Through this free service, J-M Engineers are available to study your particular operation and prepare brake block specifications based on the exact needs of each vehicle.

In this way you'll get quality blocks that deliver consistently uniform friction *balance* on all four wheels. That means you'll get longest wear, and lowest total costs per mile. In addition, you can expect less damage to drums . . . fewer road calls.

To implement this program

Johns-Manville Brake Blocks are now color-coded for two important reasons. First, to designate medium, high, or low friction level as selected for optimum performance. Second, to provide instant identification by mechanics and thus insure correct application in accordance with J-M's recommendations.

Don't overlook this opportunity to make important reductions in drum wear—minimize braking expense—step up vehicle performance. Write or call Johns-Manville Brake Advisory Service, Box 14, N. Y. 16, N.Y. In Canada, Port Credit, Ont.



Invite this
J-M Expert

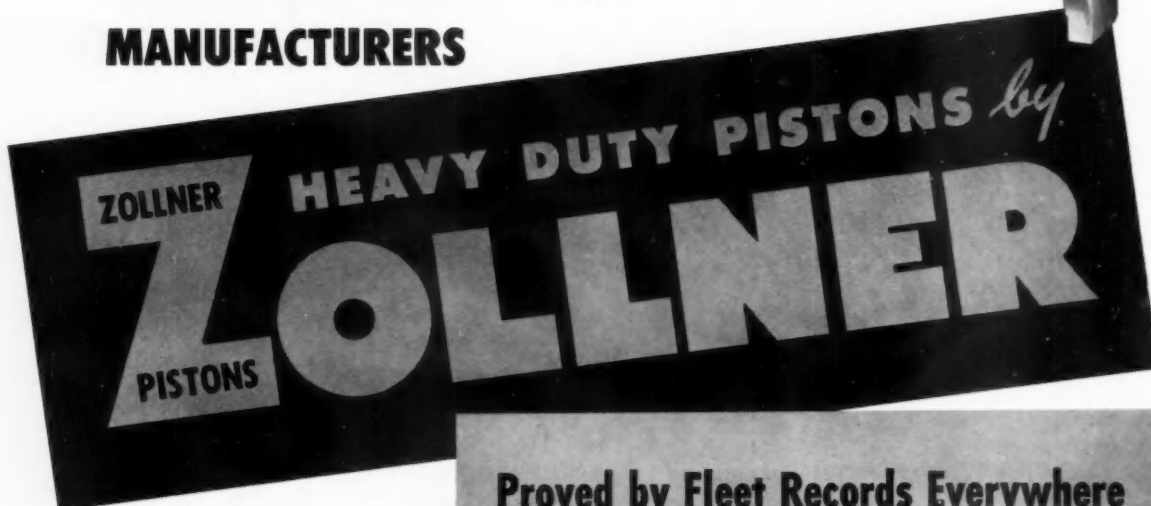
to offer his expert advice on a sound program designed to achieve greater efficiency and operating economy for each vehicle in your fleet. His services are free. Write Johns-Manville Brake Advisory Service at address above.



BRAKE BLOCKS

Original Equipment PISTON

**OF OVER 70% OF ALL
TRUCK AND BUS
MANUFACTURERS**



**Proved by Fleet Records Everywhere
HIGHEST ENGINE PERFORMANCE
LOWEST MAINTENANCE COST**

**For reconditioning
Always Specify the
"ENGINEER APPROVED" PISTON**

Expertly engineered pistons make a big difference in engine performance—and operating cost. That's why it's always best to insist on Zollner "Engineer-Approved" Pistons when reconditioning your engines. The big majority of engine manufacturers work hand-in-hand with Zollner engineers in the development of pistons best suited to heavy-duty use. Over 70% of all makes of trucks and buses are Zollner equipped — and have been for years. Only when you use Zollner can you be sure that your pistons are expertly designed and precision-made to individual engine specification for utmost performance and economy of operation.

ZOLLNER CORPORATION • FORT WAYNE, INDIANA

**Manu
Liter**

wiring
of syst
Warner
Beloit,

Have
Engine
DE732.
shows
abrasiv
parts;
Caterpi

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specs.
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booklet
Dearbo

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AD77,

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Trucks
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of Int
autom
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from
Auto
Consum
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Rev
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No.:
368-7;
EB-35
—EB-
SQD,
—EB-
367-7;
"P" I
5703;
Axle—

COMM

Manufacturers' Literature

Continued from Page 150

wiring diagrams and complete data of system components. Free from Warner Electric Brake & Clutch Co., Beloit, Wis.

Have You Been Around When Your Engine's Torn Down? Form No. DE732. Eight pages in color, booklet shows effects of varnishes, sludge and abrasive particles on critical engine parts; evaluates oil types. Free from Caterpillar Tractor Co., Peoria, Ill.

A Guide to Proper Truck Selection for Construction Work. Shows types of Ford vehicles available for particular construction jobs and charts their specs. Also offered: **Ford Trucks in Fire Fighting Applications**, showing Ford trucks and custom-made accessories currently being produced. Both booklets free from Ford Motor Co., Dearborn, Mich.

"How to Get Better, Safer Brakes," Form No. 3033. It lists demands put on braking system for light and medium trucks and describes World Bestos brake linings. Free from World Bestos, New Castle, Ind.

Take the Perish out of Perishable, Form No. BTI-57R. It describes company's refrigerated aluminum trailers. Free from Brown Trailers Inc., Dept AD77, P.O. Box 54, Spokane 10, Wash.

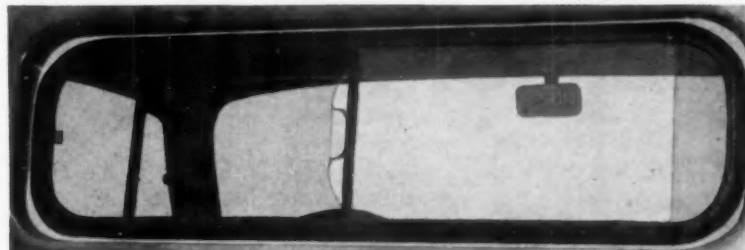
"Fifty Years of International Trucks, 1907-1957," Form No. CR-317-G. Booklet commemorates anniversary of International Harvester, showing automotive development in 50 years. Traces progress of truck manufacture from first high-wheeled, 20 hp IHC Auto Wagon to present. Free from Consumer Relations Dept., International Harvester Co., 180 North Michigan Ave., Chicago 1, Ill.

Revised Timken-Detroit Axle Division Bulletins. Order by axle Model No.: U-200 & 300 series—No. EB-368-7; SLHD lightweight tandem—EB-355-7; SQHD lightweight tandem—EB-356-7; SLD, SLDD—EB-369-7; SQD, SQDD—EB-360-7; SRD, SRDD—EB-357-7; SFD, SFDD—4700—EB-367-7; SFD, SFDD—4700—EB-366-7; "P" Brakes for Trailer Axles—SP-5703; and TK-500 Series Trailer Axle—EB-341-7.

BARBER'S

DELUXE SLIDING REAR WINDOWS for All Trucks

GETS THE JOB DONE!



Pat. Nos. 2,770,487-2,805,097 Other Pat. Pend.



Chevrolet & GMC



Ford

AVAILABLE IMMEDIATELY

- 1947-57 Auto Car
- 1947-57 Chevrolet
- 1948-57 Dodge
- 1954-57 Diamond "Ts"
- 1948-57 Ford
- 1947-57 GMC
- 1954-57 Internationals
- 1950-57 Macks B & D Models
- 1951-57 Reo
- 1941-57 Studebaker
- 1952-57 White (3000 Series)

Barber's DeLuxe S-L-I-D-I-N-G Rear Truck Windows answer the many problems . . . Give Drivers full-view rear work opening to operate winch controls, straighten cables, *true air conditioning without refrigeration* and hear instructions . . . Gives Management a Faster and Safer Job.

- Installs in just 20-minutes!
- Fits original rear cab opening!
- All units contain Safety Glass!
- Completely Weather Proof!
- Locks When Closed!

\$37.50

LIST
F.O.B. Oklahoma City
Subject to change
without notice.

When ordering please include make, model and year (may be assorted models for quantity price). Installation instructions with each unit. Overnight delivery to many areas.

Also Units Available for Crew (Cabs) Shelters, Sleepers, Flat Backs, Station Wagon, Sedan Delivery, Panel Trucks and Units Made to Order.



BARBER'S GLASS & MANUFACTURING CO.

1315 HARRISON, BOX 588, Phone FOrest 5-4358, OKLAHOMA CITY, OKLA.

New WHITE 4000

Has Important Payload Advantages ... Great New Power Advances

Now White rounds out its highway tractor line with this weight-saving, payload-boosting White 4000. It carries on the great White tradition of quality—adds modern, husky design and rugged power, plus maximum earning power for all applications where front axle loadings heavier than normal are not required.

It fills an important role in the great White line of tractors—find out how it can boost earning power for you.

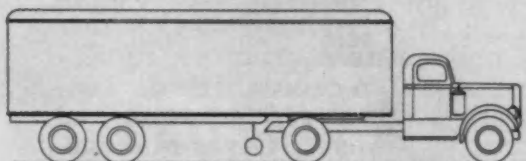
THE WHITE MOTOR COMPANY
Cleveland 1, Ohio

AUTOCAR DIVISION • Exton, Pa.

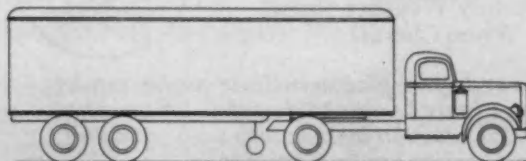
REG DIVISION • Lansing, Mich.



**WHATEVER YOUR PAYLOAD REQUIREMENTS
THE WHITE FULL LINE IS ENGINEERED FOR YOU**



THE WHITE 9000 with the 90-inch dimension
(front of bumper to back of cab). For states where both front axle loadings and the "L" dimension are important factors.



THE WHITE 4000

Lightweight design with rugged power for all payload applications where front axle loadings heavier than normal are not required.

**THE WHITE
3000
with the
power-tilt cab**



Where heavy front axle loadings are the most important factor.



GASOLINE OR DIESEL POWERED FOR MAXIMUM OPERATING ECONOMY



SUN OIL COMPANY PUTS WHITE 4000 ON PRODUCTION-LINE SCHEDULES IN BALTIMORE

Here's one of the first important tests given the White 4000 and it is delivering the goods with flying colors.

Stamina—lots of it—is required on this tough schedule: round-the-clock operation, 7-days-a-week—on a Baltimore-Washington commuting job, delivering 6100 gallons of petroleum each trip—up 900 gallons from the combination previously

used. Veteran Driver Jack Raymond says: "There's plenty of power reserve. Scarcely have to shift gears all the way."

This new White 4000 of the Sun Oil Company's fleet has 490A 225 horsepower Mustang ... 146 inch wheelbase ... 521B transmission ... 235C double reduction rear axle ... 10.00 x 20 tires. It's the newest star in the great line of White highway stars!

Give your fleet these four important

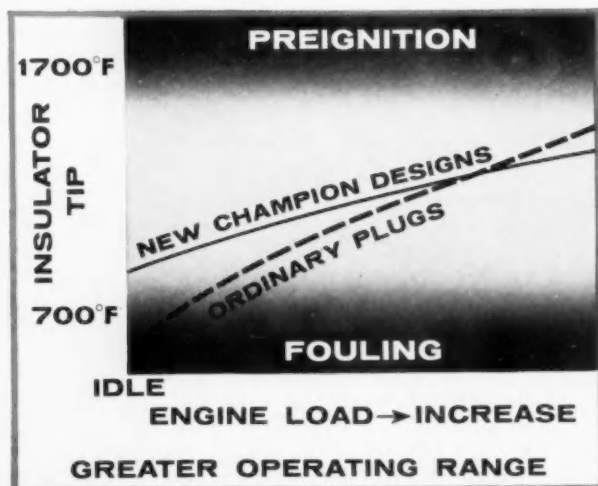


Advantage No.1

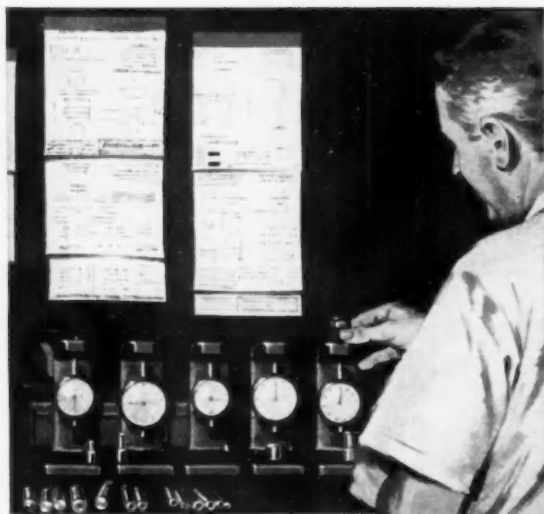
Exclusive Technical Help—Fleets using Champion Spark Plugs have an extra technical resource to draw on—the world's largest engineering and research organization devoted exclusively to spark plugs. Only Champion can offer you this important, time-and-money-saving advantage. If you have an ignition problem, chances are your Champion representative can help you. If you haven't met him, write Champion at Toledo 1, Ohio, and ask to have him call.

Advantage No.2

Wider Operating Range—This graph (left) shows how new Champion plug designs give you wider operating range. Hotter in the low power range to fight fouling, Champions run cooler at peak engine loads—giving greater protection against preignition.



advantages with Champion Spark Plugs



Advantage No.3

Product Uniformity—Gauging newly machined shells to fine tolerances, inspectors put a Champion Spark Plug component through one of the many inspections that form an important part of Champion's manufacturing operation. Raw materials, parts in process, and finished plugs must meet rigid specifications. The result—uniformly excellent spark plugs.



Advantage No.4

Maximum Life—Champions give your fleet the advantage of the longest possible spark plug life—even under such severe operating conditions as these. Hard, heavy hauling soon puts combustion chamber temperatures up into the critical ranges where ordinary spark plug electrodes burn away far faster than Champions' Powerfire electrodes.

CHAMPION SERVICE TIPS for better engine performance

SPARK PLUG SERVICE LIFE

Some interesting information was gathered recently regarding spark plug service in commercial trucking fleets. Surveyed were a total of 321 city delivery operations and 338 over-the-road fleets; these included companies using Champion Spark Plugs as well as other makes. About 75% of all the fleets surveyed are obtaining the normal 10,000 mile "life expectancy" from plugs; a considerable number of highway operations, however, are obtaining well in excess of 13,000 miles from spark plugs.

Over-all life of plugs in highway service, however, was around 1,000 miles greater than the average obtained in start-stop delivery work. This indicates that many spark plugs are discarded not because they are worn out, but rather because they are

fouled with accumulated deposit. Proper use of the Champion Service Unit was effective in lengthening spark plug service life up to 20% in the fleets surveyed.

Surprisingly little difference in total plug life could be determined between makes of trucks. Where unusually short service life was detected in a fleet, however, one or more of the following reasons were evident: (1) use of the wrong spark plug heat range; (2) generally poor maintenance or lack of routine tune-up, or (3) unnecessary replacement of usable spark plugs.

If your records indicate unusually short spark plug life, why not write Champion Service Dept., and let us try to lower this cost item for you!



CHAMPION

**SPARK
PLUGS**

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO

Clean the Cooling System . . .

Continued from Page 84

Cleaning out of hard scale is another matter. Although pressure flushing will remove loose deposits in the cooling system, it will not remove hard adherent scale. Therefore, a prepared clean-

er is necessary to remove such clinging deposits.

Cooling system cleaning may not be effective if the radiator is left uncovered during the cleaning operation. Because of the low heat out-

put of the engine running without load, the thermostat valve may remain closed and in cool weather may cut off practically all flow of cleaning solution through the radiator.

Importance of neutralizing and completely removing cleaning solutions from the cooling system cannot be over-emphasized. If cleaner solution is left in the cooling system, it can produce such a degree of corrosive contamination and depletion of anti-freeze inhibitor that draining and discarding of the anti-freeze solution will be necessary to avoid rapid rust formation and corrosion attack.

For the most part, radiator hose failures are due to swelling, hardening, cracking and rotting and it is just about impossible to tell the condition of the hose by simply observing outward appearance. The hose should be removed and the inner liner carefully checked. Hose reinforcing springs should be checked for corrosion.

Hose that has

become soft and spongy may collapse and cause a restriction in the cooling system. On the other hand, hose that has become hard can cause undue strain on the radiator inlet and outlet connections.

When placing the hose back on the vehicle, clean the pipe connections and apply a thin coat of non-hardening sealing compound. Do not use grease or oil as an aid in forcing undersized or swollen hose over the pipe connections, as petroleum products have adverse effect on rubber. Hose clamps that buckle the hose or do not make a tight joint should be replaced.

Heater hose should be installed without kinks and supported in such a way that vibration does not cause excessive flexing. Bear in mind that heater hoses should not come in contact with hot metal such as exhaust manifolds.

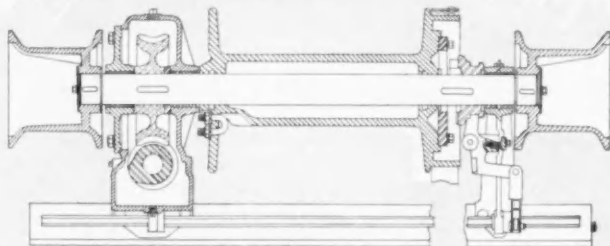
The thermostat is

often thought of in connection with driver comfort, but it is most important for best engine performance. High temperature thermostats are strongly recommended in

(TURN TO PAGE 162, PLEASE)

BRADEN TRUCK WINCHES

Take a Look INSIDE!



The most important part of your BRADEN Winch is out of sight. If you could see inside you would be convinced that every part is precision-made to stand up under the most grueling conditions.

BRADEN Winches are made for back-of-cab or front-end mounting and range in capacities from 6,000 to 100,000 pounds. Specify BRADEN Truck Winches . . . and be sure!

WRITE
FOR
CATALOG

BRADEN WINCH COMPANY

P. O. Box 547, Broken Arrow, Oklahoma



In service around the world



Need an extra truck... fast? (Get The Hertz Idea)

Ever had one of these days? A truck breaks down. You've got deliveries to make coming out of your ears. Your phone's ringing constantly. Complaints like "Where's my delivery?" Brother!

Relax. Call Hertz for that extra truck! Then send your driver to us with proper driver's license and identification. We'll give him the

keys to a clean, modern Chevrolet or other sturdy truck. In minutes your deliveries are rolling again!

You can rent a Hertz truck by the hour, day, or week, too. Low rates include all gasoline, oil, and proper insurance. In St. Paul and Minneapolis, Minn., for example, a 2-ton van truck is only \$12.50 for 24 hours plus 14 cents a mile (lower

by the week). You pay only \$19.50 for a 50-mile trip! Rates, of course, vary slightly in different cities.

So end delivery delays. Get The Hertz Idea. Call your local Hertz office—listed under "Hertz" in alphabetical phone books everywhere! Hertz Truck Rental, 218 South Wabash Avenue, Chicago 4, Illinois.

Hertz rents Chevrolets or other sturdy trucks in ½, 1 or 2-ton sizes with pick-up, panel, van or stake bodies.



Most experienced...by far

HERTZ
Truck rental

Cooling System

Continued from Page 160

cold weather to improve the engine operation and help avoid oil sludge formation. Some fleet operators favor use of lower temperature thermostats in order to use lower boiling point anti-freeze (alcohol base). This can be a false economy for engine wear is acceler-

ated by cold running engines.

To test thermostat, place in water, heat up to opening temperature specified by the vehicle manufacturer and observe very closely the opening and closing functions. Any mechanical irregularity, no matter how slight, should discourage the reuse of the thermostat.

Recently we made an early morning call on a contractor fleet. To our surprise, we found

the operators refilling the cooling systems with water while the engine was running. The superintendent pointed out that it was general practice to drain all cooling systems nightly as a precautionary measure against freezing. What the foreman did not realize was that this practice was extremely harmful to the engine block.

One of the main enemies of the cooling system is oxygen. In fact, oxygen is the essential factor in the process of corrosion. A continued supply of oxygen from outside supports corrosion. Cooling system tests have proved that aeration increases corrosion to an unbelievable degree—in copper it has increased 55 per cent, in brass 60 per cent, in solder 200 per cent and in iron 900 per cent.

Normally oxygen present in the water is liberated by heating and boiling and for this reason automotive engineers recommend that as little water as possible should be added to the cooling system. Therefore, fleet men should make every effort to limit the amount of times the cooling system is drained, and—if draining is necessary—it is a good practice to return the same water to the cooling system.

When a cooling system is being refilled, air usually is trapped in the engine water jacket, and with the engine running at idle it's just possible to critically overheat certain spots in the engine due to the lack of coolant. Also the water may appear to be at the proper level but when the thermostat opens the trapped air escapes, leaving insufficient volume of coolant. Therefore the practice of nightly draining the cooling system should be discouraged.

END

Please Resume Reading Page 86

City Delivery Driver: "You say your brother made a 300-mile auto trip and averaged 75 miles an hour? That I'd like to see!"

Hi-Lo Operator: "Why, man, we can't go out and dig him up just for that."

Why you'll agree...



SILICON RECTIFIERS

INTRODUCE THE "Golden Age" IN BATTERY CHARGER-TESTERS

It's here! The "Golden Age" in battery charger-tester performance—by Marquette through silicon, a remarkable discovery of modern research. Vital to guided missiles and jet aircraft, the Silicon Rectifier is now featured in the brilliant, new Marquette "Golden Age" series of 6V-12V Battery Charger-Testers.

Here's how you profit by this major advance: For the first time, you get unlimited rectifier service because the silicon element's non-aging nature prevents deterioration.

For the first time, too, you get maximum efficiency without power loss at the high

ambient temperatures so common to battery charging and testing overload conditions. Hermetically sealed, these rectifiers are protected against acid-laden gases, humidity and other contaminants common to service station atmosphere.

So important, too, Marquette's "Golden Age" series carry Underwriters' Laboratory approval and a full 5-year rectifier guarantee. Also featured are Marquette's exclusive 12V battery cell check accessory, 20 Second Test and automatic charging. Call your jobber for details on the complete Marquette line.

MARQUETTE

MANUFACTURING COMPANY, INC.

307 East Hennepin Avenue • Dept. 7-94
Minneapolis 14, Minn.



MIDLAND POWER BRAKES

"We operate a big fleet . . . MIDLAND makes money for us!"

"We've been using Midland Power Brake equipment on our trucks and trailers for years," continues Don B. Smith, Secretary and Treasurer of Consolidated Freight Co., Saginaw, Michigan, "and it's been a mighty good investment for us — performance-wise, service-wise, any way you look at it."

Mr. Smith's high regard for Midland braking systems is shared by hundreds and thousands of truck operators all over America.

Midland has the most complete line of power brakes — air and vacuum. And you can count on Midland equipment giving you long, trouble-free service — at lowest overall cost — because highest quality is *engineered and built into* every Midland product.

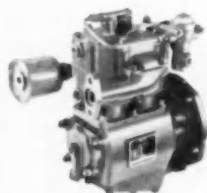
If you haven't completed converting your trucks or trailers to meet current ICC regulations governing emergency braking controls, we'd like to serve you. Our equipment does more than comply with what the ICC requires. We give you *extra* protection and service features that make money for *you*.

There's a Midland Distributor near you. He'll welcome your call.

THE MIDLAND STEEL PRODUCTS COMPANY

OWOSSO DIVISION • OWOSSO, MICHIGAN

Export Department: 38 Pearl Street, New York, N. Y.



Midland Air Compressors have many exclusive advantages, are known for their clean, carbon-free operation, their ability to produce pressure faster with less power.



Photographed on the loading platform of Consolidated Freight Company's Detroit terminal is Don B. Smith, Secretary-Treasurer of the concern, which was founded in 1926. The company operates over 900 pieces of equipment, has 17 terminals located in 4 states: Michigan, Ohio, Indiana, Illinois. Consolidated's President is A. F. Mathews, whose headquarters are the firm's main offices at Saginaw, Michigan.

Three Routes to Transit Profits

Continued from Page 77

A source of "silent" income is selling advertising space on the side of the bus. Many lines already use "spectaculars," more or less successfully.

Because of the expected criticism if a San Francisco, Cal., bus

came down the street looking like a gigantic loaf of bread, Fielder, Sorensen & Davis, working with the Public Utilities Commission, sought a less glaring form of spectacular. An advertising agency re-designed the paint

scheme for the bus sides to give a large white space for the ad, but limited the copy area to 4 x 18 ft. The remaining 278 sq ft area forms the background. Ad space on 100 new buses is being offered at \$70 per month to a limited list of San Francisco advertisers.

Dave Ringo, president

of The Green Line, Covington, Ky., said not long ago: "Without going outside the sources of ordinary revenue . . . certainly charter and advertising revenues constitute a field, which might be actively plowed and cultivated. While realizing there has been some criticism of the use of spectaculars on buses because of their gaudiness and color, for myself I don't care what color it is either as long as it brings in added revenue."

For attracting more

customers, here are some of the ideas individual transit companies have put into use recently:

The Cleveland (Ohio) Transit System is providing a special charter bus service to one of the city's oldest churches which suffered from a parking problem. Ten buses today are running regular Sunday church routes, carrying more than 2500 persons. Other churches are planning to join the system.


When the Seattle (Wash.) Transit System put on 100 new GM air-suspension buses, company officials sent a "free" bus around on all of its lines as a promotional gimmick. None of the patrons knew which line would be served by the free bus until they saw the gaudily-painted vehicle approaching. It stayed on a line one day from 6 a.m. until 6 p.m.

Nashville (Tenn.) Transit

has come up with a couple of little extras for their patrons which have received wide public approval. First, they introduced downtown shelters to protect riders from the hot Southern sun and sudden showers.

Then NTC offered "BUSTer Service." Kiddie carts were lined up under the shelters so mothers could bring the children shopping. (TURN TO PAGE 169, PLEASE)

TIRE SERVICE PROBLEMS? Solve them with modern **BISHMAN** equipment!



TESTERS

#855T Tester for Tubes & Tubeless Tires

#856 Tubeless Tire Tester. Passenger sizes



TRUCK TIRE CHANGERS

#934 Tubeless Truck Tire Tester 12:00 x 24.5

#932 Tubeless Truck Tire Changer. Power & Hand Models

#750 Barrel Pump Vapor Proof. 6 Models



BEAD BREAKERS

#922 Truck, Tractor, Aircraft Bead Loosener & Tire Remover

#860C Truck Tire Remover


#918 SAF-SUR Bead Breaker



TIRE CHANGERS

#880 Power Tire Changer. 14" to 17" Wheels

#881 Hand Operated Tire Changers. Three Models



ELECTRIC VULCANIZERS

#870 Heavy Duty Tube Vulcanizer

#930 Tubeless Tire Vulcanizer

#425 Tire Spreader Hydraulic

#555 Tire Spreader Air Operated

#600 Bead Expander Anti-friction Type

#125 Rubber Jug One Piece, Non-Breakable



#932 HEAVY DUTY TUBELESS TRUCK TIRE CHANGER

Mount or dismount heavy truck tire by power with a touch of the control. Takes 17.5, 19.5, 22.5 and 24.5 drop center wheels and rims. Self centering air chuck, 110 V. motor. Fast, SAFE solution to tubeless truck tire changing problems.



#934 TUBELESS TIRE TESTER

TIPP-IN Tester takes all the work out of testing tubeless truck tires up to 12:00 x 24.5. Also takes tubes up to 50" diameter. This one tester solves all your tubeless tire and tube testing problems.

Modern BISHMAN Equipment is sold only through leading Automotive Equipment Jobbers. Ask your local jobber about Bishman Equipment to solve your service problems.

Bishman

MANUFACTURING COMPANY
OSSEO 2, MINNESOTA

**protect
your
revenue!**

FRUEHAUF can assure your compliance with all ICC safety regulations

The ICC is cracking down on safety equipment violators. "Out-of-service" sanctions, penalties, and emergency purchases cost you *much more* than a little foresight. So — be prepared, be safe . . . and keep rolling with low-cost, high quality ICC-required safety parts and accessories from Fruehauf. Big volume enables us to keep a full line and offer the lowest parts prices ever at all Fruehauf Branches coast to coast!

For safety's sake and your profits' sake also investigate the various low-cost Fruehauf Preventive Maintenance Plans. This service will assure that your units are always up to ICC standards. They're scheduled to keep your equipment at top earning capacity at all times. Consult Fruehauf for all van and tank repairs, low-cost high-calibre painting, insulation repairs, and tandem conversion or van lengthening. Convenient terms available on major jobs!



World's Largest Builder
of Truck-Trailers

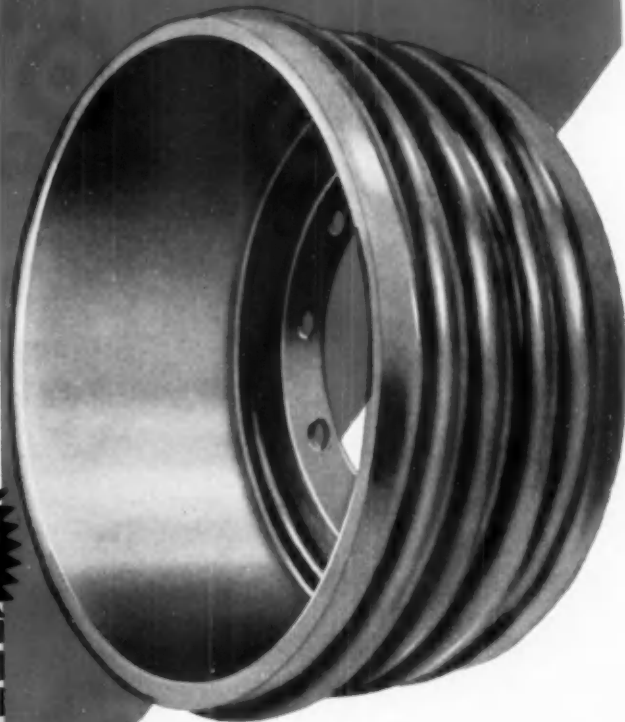
FRUEHAUF TRAILER COMPANY

10941 Harper Avenue
Detroit 32, Michigan

SEND FREE COPY OF TTMA MANUAL OF RECOMMENDED
TRAILER P.M. PRACTICES

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

You'll be safer with low-cost parts and accessories like
the New Fruehauf Centrifuge Brake Drum



At a cost lower than that of many cast iron drums, you can assure the braking safety of your fleet with Fruehauf's centrifrically bonded steel and iron alloy drums.



GASOLINE TRANSPORT COMPANY
LOUISVILLE, KENTUCKY



SACCANI DISTRIBUTING COMPANY
SACRAMENTO, CALIFORNIA



H. W. LAY & COMPANY, INC.
TAMPA, FLORIDA



The Big Fleets buy more than any other Ford Trucks cost less!

**Official truck registration data for the past two years shows that owners of America's biggest commercial truck fleets have bought more Ford trucks than any other make*



PURETA SAUSAGE COMPANY
SACRAMENTO, CALIFORNIA



GLASSCOCK BROTHERS
LITCHFIELD, KENTUCKY



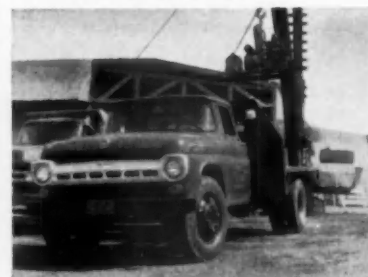
FLUHRER BAKERIES
MEDFORD, OREGON



PIONEER ICE CREAM DIVISION,
THE BORDEN COMPANY, BROOKLYN, N.Y.



HUNTER PACKING COMPANY
EAST ST. LOUIS, ILLINOIS



A. TEICHERT & SON, INC.
SACRAMENTO, CALIFORNIA



POWELL BROTHERS TRUCK LINES, INC.
ST. LOUIS, MISSOURI



BLAIR'S BUTANE, DINUBA, CALIFORNIA



STEVE WILSON, WHITE CITY, OREGON



WM. B. MORSE LUMBER CO.
ROCHESTER, NEW YORK

FORD TRUCKS make!*

LESS TO OWN

LESS TO RUN

LAST LONGER, TOO!



STAHL-MEYER, INC.
NEW YORK CITY, NEW YORK



CITY OF RIVER OAKS, TEXAS



HIMES BROTHERS DAIRY, DAYTON, OHIO



WESTCHESTER COUNTY
VALHALLA, NEW YORK



7-UP BOTTLING COMPANY OF
TAMPA, FLORIDA



PATTI-BONO, DELANO, CALIFORNIA



SUBURBAN PROPANE CORPORATION
WHIPPANY, NEW JERSEY

Speeds Up Fleet Painting! Satin Prime

Flash Dries in 15 minutes!



... No sanding

... Apply finish coat immediately!

DITZLER'S SATIN PRIME—DPE-1338—is a light gray, non-sanding primer sealer. It is specially prepared to give faster and better results when repainting lighter shades of colors, commonly used on many trucks and other commercial vehicles.

• By Reducing with Ditzler's DTE-101 or DTE-202 for spraying, new SATIN PRIME can be applied in a one wet coat film. It covers equally well over bare metal or properly prepared old lacquer or enamel. A thin coat gives you all the advantages plus a better finish than a heavy coat. No sanding required.

• SATIN PRIME flash dries in 15 minutes. Lacquer or enamel may be applied immediately after flash drying so that primer sealer and color coat dry down thoroughly together. You'll find SATIN PRIME gives you better holdout and adhesion than any other similar product you've ever tried.

Ditzler's FERROCHROME PRIMER DPE-1202 Inhibits Rust!

• Besides SATIN PRIME, Ditzler also makes available its popular FERROCHROME PRIMER, DPE-1202 specifically formulated for industrial and fleet use. This is a red oxide non-sanding primer. In addition to all the excellent properties to be found in SATIN PRIME, DPE-1338, this FERROCHROME PRIMER is a highly effective rust inhibitor.



DITZLER COLOR DIVISION, Pittsburgh Plate Glass Company, Detroit 4, Michigan



DITZLER®

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

P I T T S B U R G H P L A T E G L A S S C O M P A N Y

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Transit Profits

Continued from Page 164

ping, borrow a stroller and relieve a lot of problems of caring for Junior in downtown department stores. The mother phones in her reservation for a stroller before boarding a bus; and when she alights downtown, a supervisor checks her reservation, hands her a shopping bag and often puts Junior in the stroller for her.

Waco (Texas) Transit Co. has added an all-white bus to its fleet as a goodwill ambassador. For special occasions—the first was the Heart of Texas Fair in Waco—the bus is lettered appropriately to suggest going by bus.

One of the most recurring reasons given for the down-trend in transit is the use by the American housewife of the suburban shopping center. Cincinnati (Ohio) Transit Co. decided to "join 'em" and is now offering regular service to Cincinnati's newest and largest center. With the aid of the merchants, one route was extended and terminates at the center while a nearby crosstown line now detours through it. Richmond's Virginia Transit Co. followed suit by offering service to the new Willow Lawn Center.

Baltimore (Md.) Transit employed three lovely young women—dressed in smart business suits—to pass out schedules to customers, discuss complaints, give varied information and conduct service surveys. Often they serve as hostesses for intra-office meetings; and when the company presented several old street cars to the Maryland Historical Society, two of them donned Gay Nineties costumes for the ceremonies.

Niagara Frontier Transit System, Buffalo, N. Y., and 28 downtown stores cooperate for the annual pre-Easter shopping campaign. About 30,000 free tokens are distributed by the stores—after a purchase of \$1.95 or more—for a free trip back home.

(TURN TO PAGE 171, PLEASE)



Ringsby's new Peterbilt dromedary-tractor units feature Cummins Turbodiesel engines and Fuller 10-speed R-96 ROADRANGER Transmissions.

RINGSBY propels "Rockets" with Fuller ROADRANGER® Transmissions

Ringsby Truck Lines, long famous for setting the pace between Los Angeles and Chicago, and Salt Lake City and Chicago, get full benefit of *all* the diesel engine power through Fuller 10-speed R-96 ROADRANGER Transmissions.

Says Fred E. Day, Jr., Vice President of Operations: "Ringsby Truck Lines has used Fuller Transmissions in a large share of its equipment for many years, and has experienced excellent performance with a minimum of maintenance cost. Be-

cause of this, we now specify Fuller 10-speed ROADRANGER Transmissions in all of the new equipment."

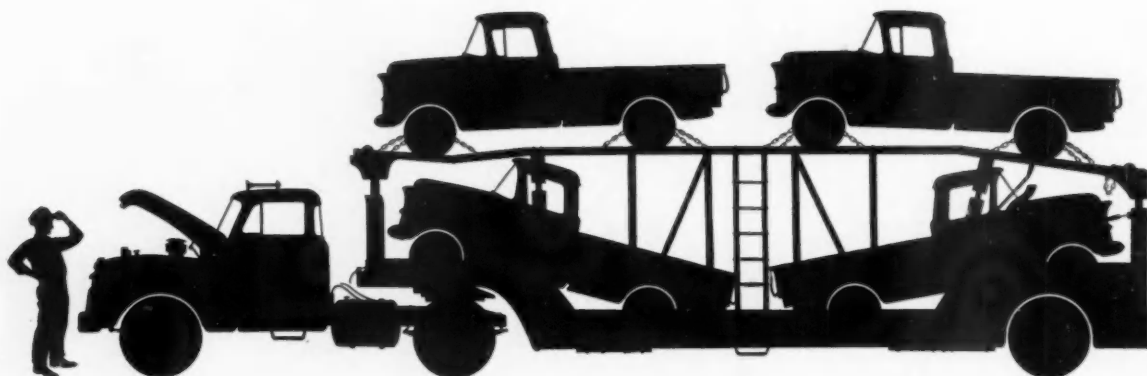
Ringsby's new dromedary-tractor units feature greatly increased payload space and flexibility in freight handling. The Fuller 10-speed semi-automatic ROADRANGER Transmissions provide easier, quicker shifts—higher average road speeds—greater fuel economy—longer engine life—less driver fatigue—greater profits.

Ask your truck dealer now for full details on the easiest-shifting, *driver controlled*, Fuller Transmission for your specific job.



FULLER MANUFACTURING CO., Transmission Div., Kalamazoo, Mich. • Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, Cal., and Southwestern District Office, Tulsa 3, Okla.

Who threw the monkey wrench in Mr. Murphy's schedule?



A dead battery can wreck the best of schedules. So don't fritter away pay time with an idle truck. Play safe with a Delco Extra-Duty --the battery that lives up to its warranty.

One dead battery can knock a well-planned delivery schedule into a cocked hat. The best way around this problem is a Delco Extra-Duty battery.

You see, a Delco Extra-Duty is every bit as good as the warranty says it is. A crew of engineers in General Motors laboratories gave this battery the "works" before the warranty was written. Then knowing what the battery could take, Delco wrote the warranty—a

warranty that not only means what it says, but one that's good all over the United States and Canada, too.

These same General Motors laboratory tests also showed that Delco Extra-Duty batteries give you the lowest possible cost per mile of operation. Wet or dry charge, you get unexcelled performance at lowest cost—doesn't that rate Delco a place in your fleet operation?



available everywhere through independent distributors
associated with...



Coming soon . . . on CBS-TV—
"High Adventure with Lowell Thomas." On CBS Radio—Lowell Thomas newscast.

Transit Profits

Continued from Page 169

"Park and Ride" systems have worked well in a number of cities where the downtown parking situation warranted it. For instance, properties in St. Louis, Mo.; Cleveland, Ohio; Boston, Mass.; New York City; Miami, Fla., and Los Angeles, Cal., have had good results. It only fails, it seems, when motorists find parking in town easy.

Quick movement through the downtown area can go a long way toward making the overall transit system attractive. A number of lines have met success in persuading their city governments to grant bus lanes in congested areas. For instance, Nashville Transit Co. now has lanes on 15 blocks on three downtown streets for use between 7 and 9 a.m. and 4 and 6 p.m. Nashville's mayor said he was so pleased with the movement of traffic that he plans to extend the system. St. Louis is also working toward the reserved land set-up.

In the matter of schedules, having headways on which customers can rely is most important, agree transit owners. Riding checks by the Chicago Transit Authority has caused the company to institute four regular schedules for the week, rather than a weekday and a "Sunday and holiday" schedule.

M. M. "Mike" Malmer, vice president and general manager of Akron (Ohio) Transportation Co., suggests emphasizing service rather than the price angle. He says people are not interested in economy nowadays—they want service. In the same vein, Virginia Transit Co. has buried their "Frugal McDougal" for a "Let Us Be Your Chauffeur" pitch. And if price is important, Malmer says, spell it out for the patron: Bus Fare—32 cents round trip; Parking—75 cents.

Two large Cleveland, Ohio, manufacturers turned their entire personnel lists over to Cleveland Transit System for a pro-

(TURN TO PAGE 173, PLEASE)



One of Great Southern's 78 newest GMC DF862 Tractors, equipped with Fuller 10-speed R-96 ROADRANGER Transmission. A. E. Greene, Jr., General Manager, and James Ryder, President (right) talk to driver.

Great Southern and Fuller ROADRANGER® Transmissions "for service for sure"

Great Southern Trucking Company, Common Carrier Division of Ryder System, Inc., Jacksonville, Florida, relies on ROADRANGER Transmissions in living up to its slogan.

"To move freight on schedule safely between 1,300 Southeastern communities takes superior equipment, modern terminals, experienced personnel and sound business practices," says D. D. Hodges, Great Southern's Director of Maintenance. Part of Great Southern's "superior equipment" is the Fuller ROADRANGER Transmission.

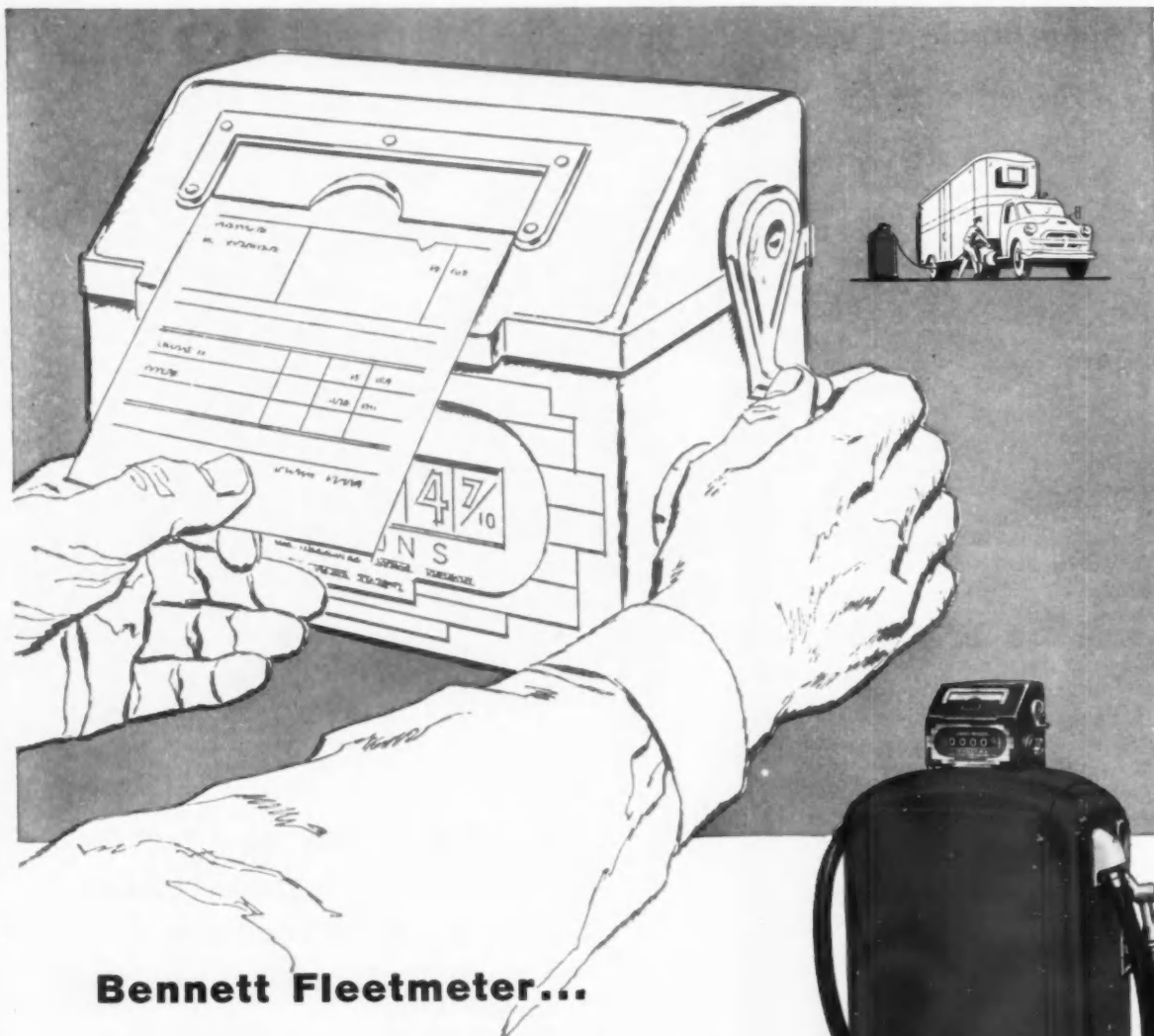
In the 30 to 40 million inter-city miles that the company's green and silver fleet covers annually, Fuller 8-speed and 10-speed semi-automatic ROADRANGER Transmissions meet every condition of time, traffic and terrain.

Drivers have complete control of every situation, shift all forward speeds with a single lever—with all ratios evenly and progressively spaced. All range shifting, up or down, is actuated by a single control at the driver's finger tips.

Select the *right* Fuller Transmission for your job. Get full details now from your truck manufacturer or dealer.



FULLER MANUFACTURING CO., Transmission Div., Kalamazoo, Mich. • Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, Cal., and Southwestern District Office, Tulsa 3, Okla.



Bennett Fleetmeter...

BUSINESS MACHINE ACCURACY FOR FLEET FUEL CONTROL

Fleetmeter gasoline pumps *keep gas records automatically*... record the exact amount of fuel used by every truck in your fleet. Ticket Printer prints the amount of fuel dispensed for each vehicle on separate tickets for precise records and inventory control.

Fleetmeter pumps are engineered and built with the same

precision accuracy that has made Bennett pumps the world's standard for comparison for long life and low maintenance cost.

* * *

Fleetmeters can be furnished with Register and Totalizer in place of Ticket Printer if desired. Remote control models also available.



JOHN WOOD COMPANY • Bennett Pump Division • Muskegon, Michigan

IN CANADA: JOHN WOOD COMPANY LIMITED • Toronto • Montreal • Winnipeg • Vancouver

Transit Profits

Continued from Page 171

posed express "trip to the office," where parking facilities were almost nil. Today the system is working fine, with door-to-door service for many of the workers.

Charter service is another form of revenue—and it can go a long way in public relations. Niagara Frontier Transit System decided in 1950 to boost chartering. Today they have a bus fleet ready every Sunday for their now-famous "Sunday Drives," low-pressure sight-seeing tours in a 150-mile radius of Buffalo. Revenue last year from the "Drives" was over \$100,000.

Dallas (Texas) Transit calls its new sight-seeing service the "Scenarama Tours." Pickups are made in front of the city's seven leading hotels for the two-hour, 30-mile trip. San Antonio's visitors may take a tour of romantic missions and St. Louis (Mo.) Public Service Co. is sending its air conditioned buses out to historic sites.

Equipment—clean, fast and comfortable—can play an equally important part in attracting new riders.

Air conditioning is the trend today, especially in the more southerly areas. St. Louis, Dallas and San Antonio have all equipped many of their buses with air conditioning after first experimenting with it. St. Louis, for instance, had 100 express buses air conditioned for use this summer at a cost estimated at \$300,000. San Antonio has had 50 cooled buses on the streets for the past 10 years. And two northern properties—New York and Buffalo—air conditioned units last year.

New equipment by itself does not necessarily attract new riders, however. Transit officials must remember that the public will take it for granted unless they are told about it. By some method, advertise!

END

Please Resume Reading Page 78



One of the 43 new General Expressways International Tractors with Fuller 8-speed R-46 ROADRANGER Transmission.

General Expressways chooses Fuller 8-speed ROADRANGER® Transmissions in fleet addition

General Expressways, Inc., Chicago, specified Fuller 8-speed semi-automatic R-46 ROADRANGER Transmissions in its 43 newest International 6-wheel tractors.

"There are several reasons why we specified the 8-speed ROADRANGERS," says John Ruan, Board Chairman. "Low maintenance cost—easier, quicker shifts, short even 38% steps between ratios—higher average road speeds—engines operating in the high rpm range, resulting in greater fuel economy—less driver fatigue

and compact space-and-weight saving economies, resulting from the transmission being under the cab . . . these are all important benefits to General Expressways' operation."

James Spice, Superintendent of Safety, adds: "The drivers like the 8-speed ROADRANGER because of the closely-spaced gear ratios. They can keep their road speed up . . . fuel mileage is better, too."

Ask your truck manufacturer or dealer now for details on the easiest shifting Fuller Transmissions for your operation, from over 110 different models, there's one designed with your specific job in mind.



FULLER MANUFACTURING CO., Transmission Div., Kalamazoo, Mich. • Unit Drop Forge Div., Milwaukee 1, Wis. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, Cal., and Southwestern District Office, Tulsa 3, Okla.



OVER-ALL ECONOMY. Fewer tire failures, fewer road delays and fewer costly repairs have meant greater over-all economy—more miles per tire dollar for United Parcel Service.

MORE MILEAGE. The extra-tough casing of nylon cord tires permits retreading again and again for thousands of safe, extra miles. Since United Parcel Service's 1954 switch to nylon, there's been a steady increase in the company's average miles per tire.



DAMAGE TO TIRES from impact and water, two of tire cord's deadliest enemies, is no problem. Nylon tire cord guards against every major cause of tire carcass failure—flexing, moisture, heat and impact.

UNITED PARCEL SERVICE SWITCHES TO NYLON CORD TIRES IN NATIONWIDE OPERATION

"We began switching our 6,500 delivery cars to nylon cord tires in 1954," reports United Parcel Service Vice President W. D. Bixby, "and today, 8 out of 10 new tires we purchase are made with nylon cord. Despite a gradual increase in the cost of tubes, labor and repair materials, our over-all tire cost per mile has dropped substantially—all factors considered; road calls and repairs have also decreased. We believe the nylon cord tire to be largely responsible for these savings."

PROVE TO YOURSELF that the advantages of nylon cord tires add up to big savings under any road and load condition. Ask your dealer about nylon cords today. Du Pont makes the tough, long-lasting nylon. Nylon cord tires are available from all tire makers.



REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



**FOR TRUCKS AND PASSENGER CARS, TOO . . .
THE STRONGEST, SAFEST TIRES ARE MADE WITH NYLON CORD**

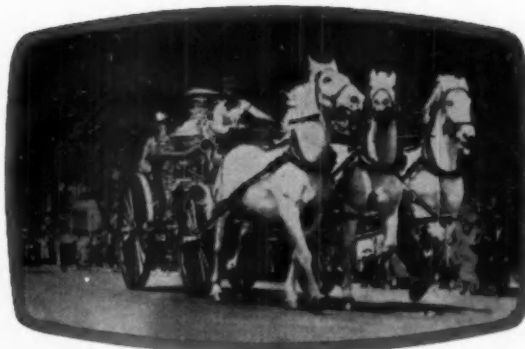
SEE TIMKEN TELEVENTS ON NETWORK TV

Two big hour-long spectacles this fall



Over 126 NBC STATIONS, SEPTEMBER 23rd

"Eleven Against the Ice", the story of the Antarctica Turnpike. See men and machines build a trail across Antarctica's frozen wastes—in spite of 200 mph winds, temperatures of 120 degrees below zero and crevasses big enough to swallow a 20-story building. It's a triumph of engineering and human courage, a whale of a television show.



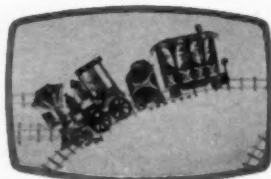
Over 142 NBC STATIONS, NOVEMBER 21st

"The Innocent Years". Recaptured from exciting old films and newsreels, you'll see happy days relived. Experience the excitement of "Teddy" Roosevelt, Thomas Edison and Mark Twain in action. Hear songs like: "In the Good Old Summertime", "He'd Have to Get Out and Get Under". Enjoy the fun of family picnics, the joys of people in the last untroubled time in our history.

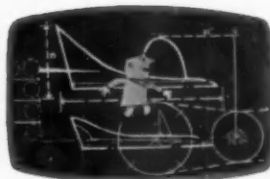
And commercials that help you sell . . .



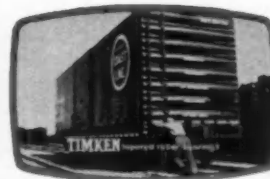
See How man stumbled on the concept of the wheel.



See Why America's railroads have always led the world.



See Why Americans jump for the latest thing in cars.



See One man push a freight car all by himself.

Years of national and trade advertising, backed by their superior performance, have made "Timken" the best-known name in bearings—a name that helps to sell the products that use Timken® bearings. Now, network

television will build an even greater awareness of Timken bearings—make them an even bigger sales plus in the equipment you sell. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN TAPERED ROLLER BEARINGS

TRADE-MARK REG. U. S. PAT. OFF.

Borg-Warner Fuel Injection

Continued from Page 90

The air throttle is basically a tube, or tubes, with one or more throttle valves, corresponding to single or multiple barrel carburetors, to meter the air requirements of the engine for all speeds and load conditions.

Pump delivery is matched to engine air requirements by manifold pressure. The fuel valve which controls the injection pump delivery is rotated by movement of a cam, which is actuated by a bellows controlled by manifold

pressure. The cam form is developed by calibration checks for the load requirements of the engine.

The cam is supported on a movable track and this track position is altered through bellows and aneroids to provide for speed, temperature, and altitude compensation. Speed compensation control is obtained by mass air flow measurement across the throttle valve.

Fuel enrichment for

acceleration is provided for by an arresting device consisting of a sleeve and plunger which acts as a dash pot that temporarily changes the cam track position to cause excess pump delivery over the amount normally delivered by the pump for the corresponding position of the load diaphragm. The cold starting and warm-up thermostatic control provides for a fast engine idle and fuel enrichment during engine warm-up. Additional fuel over the amount delivered by the injection pump for starting is introduced at the butterfly by a solenoid controlled valve, and the amount varies to meet engine requirements for hot or cold starting temperatures.

Fuel supply pump must maintain approximately 20 psi pressure in the fuel reservoir and have sufficient capacity to recirculate fuel to the fuel tank at all load conditions. Injection pump can be mounted in either horizontal or vertical position, can be gear or belt driven. Moving parts are lubricated by engine oil or filtered gasoline.

Injection pump delivery can

be changed to meet engine requirements by changing the plunger cam to increase or decrease its stroke and by changing the plunger diameter. This injection system is suitable for either manifold or direct cylinder injection, although nozzles for direct injection would be more expensive.

Fuel injection, because of the work involved in mounting and calibrating for a particular engine, will generally be merchandised as original or optional equipment, rather than as an accessory.

END

Please Resume Reading Page 92

John Bean FRAME MASTER cuts fleet operator's costs and down time



One man replaces
3 outside shops
with 1/3 savings

Since installing John Bean's Frame Master, Howard Sober, Inc., Lansing, Mich., one of the nation's largest vehicle haulway and driveway organizations, has one operator handling the frame work and maintenance checks originally performed by three outside shops. Trucks pulled in for checking are back on the road one to two days sooner.

With their combination John Bean truck and passenger car Frame Straightener-Visualiner installation, Howard Sober has cut wheel alignment and frame straightening costs by as much as 1/3. What's more, regularly scheduled alignment checks mean increased tire mileage for additional savings and an extra margin of safety for their fleet of over 300 vehicles.



You'll be interested in how economically you can set up your own John Bean truck wheel aligning and frame straightening department. WRITE FOR DETAILS TODAY.



John BEAN

LANSING 4, MICHIGAN

Division of Food Machinery and Chemical Corporation

USE
THIS
COUPON

send me
data on

- | | |
|---|---|
| <input type="checkbox"/> ON-THE-TRUCK Wheel Balancer | <input type="checkbox"/> Visualiner Modernizers for existing racks |
| <input type="checkbox"/> John Bean Truck and Passenger Car Aligners | <input type="checkbox"/> John Bean Combination Frame Straightener - Aligner |

ATTACH COUPON TO YOUR LETTERHEAD OR A POST CARD

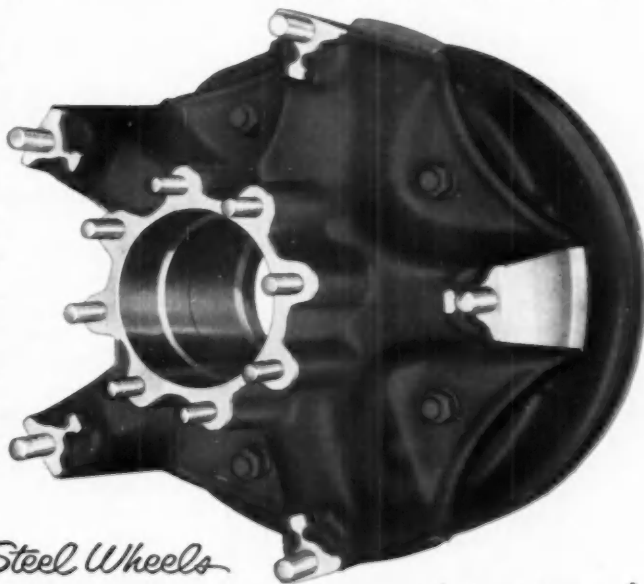


**The only truck manufacturer
not using dependable...**

Dayton made Wheels!

Dayton Spoke-Type Cast Steel Wheels are used by every heavy truck manufacturer in the U.S.A. Here are just a few of the reasons why . . .

Dayton Wheels meet the rigid specifications of truck manufacturers . . . they are lightweight to allow greater payload . . . they create a fanning action that cools tires and brakes . . . they have quick, easy rim adjustment which provides perfect alignment for longer tire life . . . and their more than 50 year history of dependable performance has won acceptance in fleets everywhere.



*Specify Dayton Steel Wheels
on your next trucks and tractors!*



cast steel wheels
brake drums



fifth wheels
landing gears




THE DAYTON STEEL FOUNDRY CO.

P. O. Box 1022, Dayton 1, Ohio

SERVING THE MOTOR TRANSPORTATION INDUSTRY OVER 50 YEARS


**get the
INSIDE
STORY-**

**BEFORE
YOU
BUY!**



Razor-edge lips ride
on precision surfaces
for low-friction
POSITIVE seal.

OIL



SAVES BEARINGS\$

There's a *big* difference in methods of sealing oil. Only **MECHANEX** offers the original patented face type sealing principle, simplicity of installation and lowest replacement cost for maximum fleet savings. So before you buy, investigate carefully... get the *best*—genuine **MECHANEX WHEEL OIL SEALS**.

Available on new equipment at all Trailer Manufacturers

Distributed by
Trailer Branches and
Leading Parts Suppliers



**THE
mechanex
Corporation**

1644 Broadway, Denver, Colorado

**SPECIFY
THE
BEST**

Sept. News Roundup

Continued from Page 100

said the first duty of a company is to start their industrial relations program at the top.

M. C. Benton, vice president of McLean Trucking Co., Winston-Salem, N. C., called employees "the company's biggest assets" and said company policy must be kept in tune with their current problems.

J. Robert Wilson, vice president of Roadway Express, Inc., Akron, Ohio, also emphasized the necessity of respect to individuals.

TPM Due Date Panel

Berg Manufacturing & Sales Co., Chicago, is marketing a self-adhering trailer preventive maintenance due date panel to be placed on the nose of trailers.

The panel shows (1) when the last trip safety inspection was completed, (2) when the last minor and major inspection was completed, and (3) basis for establishing the next due dates.

Inspection and due dates can be marked on the panel with a black china marking pencil. Old dates may be removed with a cloth dampened with a petroleum base solvent. Price to fleets is 8¢ each and to manufacturers and distributors it is 6¢—both less than the cost of manufacture.

Schramm Mourned by Industry

Louis Schramm, Jr., president of Allied Van Lines and of Chelsea Warehouses, died last month in New York City. He was 55.

Since its inception in 1953, Mr. Schramm had been chairman of the Eastern Highway Conference. He was a member of the Council of Eastern Railway and Truck Common Carriers (CERT).

Mr. Schramm had been president and director of National Furniture Warehousemen's Assn., the New York State Warehousemen's Assn. and the Movers and Warehousemen's Assn. of New York City. He helped establish New York City's office of the Impartial Chairman of the Moving & Storage Industry through which the moving interests of the public are protected.

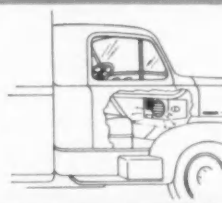
(TURN TO PAGE 182, PLEASE)

HUNTER


Transport Heating
and Refrigeration

CAB HEATERS

**safe, sure heat
at low cost
for gas or diesel rigs**




- shirt sleeve warmth in coldest weather
- gasoline-burning, thermostatically controlled
- operate independent of vehicle engine
- eliminate costly engine idling
- sub-zero starting, unfailing combustion
- conform to all ICC regulations
- economical, compact, easy to install



MODEL UH-47

Write for descriptive literature and prices
HUNTER MANUFACTURING COMPANY
30525 AURORA ROAD, SOLON, OHIO



The Big Power Plants Come Equipped with **Dayton** Raw-Edge Cog-Belts*



Look over your new equipment and you'll see Dayton Cog-Belts* wherever the job's the toughest . . . on the big generators . . . the compressor . . . the alternator drive.

The reason? Surer gripping Cog-Belts have raw-edges that won't slip or glaze, aren't affected by oil or grease, and stand up under extreme underhood heat. And, they'll pull more because they're built of synthetic fibers that — ounce for ounce — are stronger than steel.

How can you be certain you're getting the advantages of Cog-Belts? Cog-Belts are easy to recognize even when you're buying them under the vehicle manufacturer's part number. Look for raw edges and molded cogs, built right in as a strength-giving part of the belt.

© D. R. 1957

*T. H.

Dayton Rubber

World's Largest Manufacturer of V-Belts . . .

Makers of Heavy Duty Radiator Hose and Famous
Dayton Thorobred Truck Tires . . .

Pioneer Supporter of ATA Foundation

COMMERCIAL CAR JOURNAL, September, 1957

Keep Cog-Belts within easy reach. Longer lasting Dayton Cog-Belts not only save you time and money by keeping your repair bays open but you can replace your present inventory with about 2/3 the number of Cog-Belts.

Streamline your inventory and start saving, today, with a call to your Dayton distributor. Or, mail this coupon.

The Dayton Rubber Company • Automotive Division
10 Rubber Street • Dayton, Ohio



- ☐ Please send me the address of my nearest Dayton Rubber Company jobber.
- ☐ Please notify me when the Dayton Fleet Engineer can analyze our problems.

name _____

company _____

address _____

city _____ state _____

Tru-Stop Brakes

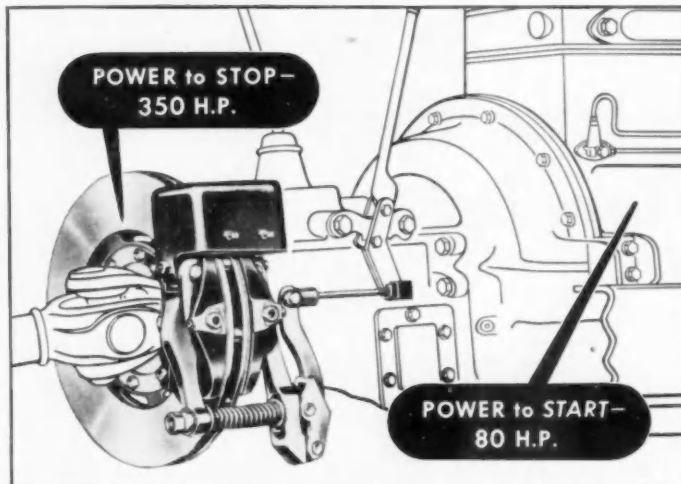
Meet Every Heavy-Duty Safety Requirement

OFFER POSITIVE PROTECTION
AGAINST RUNAWAY OR PARKING
ACCIDENTS—AT LOWEST COST

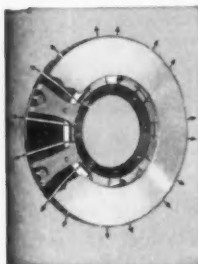
HERE IS WHY:

**They have surplus power
required for emergency
service—no dangerous
self-energizing**

TRU-STOP Heavy-Duty Emergency Brakes are not only excellent parking brakes. They serve as a complete, independent and fully reliable braking system. Operating on the propeller shaft they enable the driver to continue on safely in the event of service brake failure. TRU-STOP brakes have the surplus braking capacity to be used repeatedly as an auxiliary to service brakes.

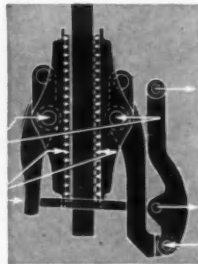


Brakes actually do more work than the engine in terms of horsepower. Where it takes 80 HP to accelerate to 20 miles per hour, it takes 350 HP to make a safe stop from 20 miles per hour within required limits



Ventilated to throw off heat

Brake efficiency depends on ability to throw off intense heat—rapidly. Discs of TRU-STOP brakes are exposed to the air even during the braking operation. Ventilated design circulates air between the disc plates.



Give uniform brake pressure

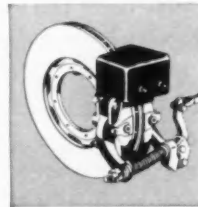
Disc of TRU-STOP brakes is "squeezed" between the flat surface of the shoes. Effort applied to brake lever operates front and rear lever arms simultaneously. Pressure is exerted on the center of each shoe. Entire lining surface is in contact.

**TRU-STOP HEAVY DUTY BRAKES OUTPERFORM AND OUTLAST DRUM-TYPE BRAKES
DON'T LET THE SURFACE AREA FOOL YOU!**



Drum-type brake

43¼ square inches of lining. Lining covers 310 degrees of the drum. **BUT** only 50 degrees of the lining-covered drum is exposed to the air.

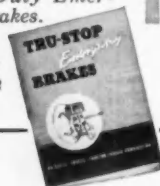


Tru-Stop brake

28 square inches of lining. 90 degrees of the disc under pressure. **BUT** 270 degrees of the disc is exposed to air. Directing and throwing off heat is basis of brake efficiency.

We will be glad to answer any questions or give you more detailed information about TRU-STOP Heavy Duty Emergency Brakes.

Send for
Catalog
DH 33



THE TEST

Drum-type Brake vs Tru-Stop Brake

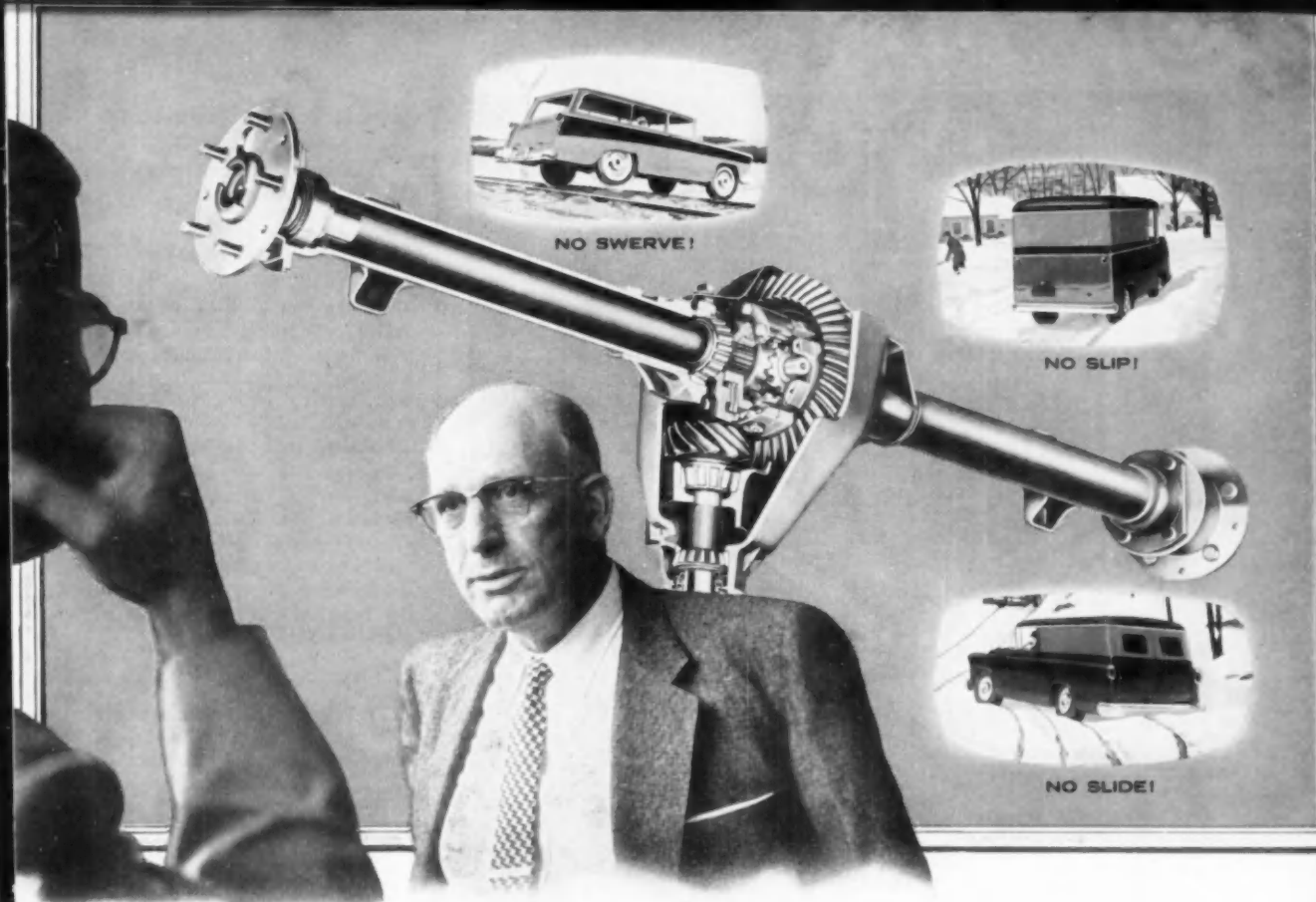
After a few light and two heavy applications from 20 MPH, lining was useless for further test.

Repeatedly stopped vehicle from 50 MPH — was then used to decelerate on steep grades. No serious damage to lining.

**Automotive and Aircraft Division
AMERICAN CHAIN & CABLE**

601 Stephenson Building, Detroit 2
2216 S. Garfield Street, Los Angeles 22 • Bridgeport 2, Conn.





"Every commercial operator can profit from the 3-way benefits of **POWR-LOK!**"

Earl M. Douglas, Vice President-Engineering, Dana Corporation

The Spicer POWR-LOK Differential can help keep your passenger cars and light trucks running more continuously and profitably, with less "hung up" time; can help cut tire and maintenance costs; and can help reduce accidents.

POWR-LOK is a revolutionary differential that permits the rear axle to automatically deliver the greatest driving force to the rear wheel that has the best gripping traction.

POWR-LOK ends slipping on ice or wet hills and pavements if either wheel can catch hold.

POWR-LOK ends slipping, sliding and getting stuck in mud or sand if either rear wheel can catch hold.

POWR-LOK ends dangerous swerve and unbalance resulting from "wild wheel" hop and spin on rough, bumpy roads.

Your new light trucks and passenger cars will be *safer*, more dependable under *all* driving conditions, if they are equipped with Spicer Thornton POWR-LOK Differentials. POWR-LOK is available in many 1958 passenger car and light truck models.

DANA CORPORATION • Toledo 1, Ohio

DANA PRODUCTS Serve Many Fields

AUTOMOTIVE: Transmissions, Universal Joints, Propeller Shafts, Axles, Powr-Lok Differentials, Torque Converters, Gear Boxes, Power Take-Offs, Power Take-Off Joints, Clutches, Frames, Forgings, Stampings.

INDUSTRIAL VEHICLES AND EQUIPMENT: Transmissions, Universal Joints, Propeller Shafts, Axles, Gear Boxes, Clutches, Forgings, Stampings.

AVIATION: Universal Joints, Propeller Shafts, Axles, Gears, Forgings, Stampings.

RAILROAD: Transmissions, Universal Joints, Propeller Shafts, Generator Drives, Rail Car Drives, Pressed Steel Parts, Traction Motor Drives, Forgings, Stampings.


AGRICULTURE: Universal Joints, Propeller Shafts, Axles, Power Take-Offs, Power Take-Off Joints, Clutches, Forgings, Stampings.

MARINE: Universal Joints, Propeller Shafts, Gear Boxes, Forgings, Stampings.

Many of these products manufactured in Canada by Hayes Steel Products Ltd., Merriton, Ontario



ERIE *Wheels Brake Drums*



Automotive Wheel Division

ERIE MALLEABLE IRON COMPANY

ERIE, PENNSYLVANIA

Sept. News Roundup

Continued from Page 178

Spray Painting School

The DeVilbiss Co., Toledo, Ohio, in the next few months will take its training school for spray painting into the field for the benefit of the company's contract automotive jobbers.

Regular Toledo instructors will duplicate the course in the field that is followed at the factory school. In compact, three-day sessions, the theory, operation, maintenance and servicing of DeVilbiss equipment will be presented to automotive jobber personnel engaged in the sale or servicing of the company's spray painting equipment.

1957 Truck Trailer Shipments

Type	June	Six Months
Vans		
Insulated and refrigerated	482	2,545
Steel	58	353
Aluminum	424	2,192
Semi-insulated	30	343
Steel	30	343
Aluminum	105	982
Furniture	97	904
Steel	8	88
Aluminum	1,956	10,201
All other closed-top	645	4,940
Steel	911	5,261
Aluminum	228	1,632
Open-top	112	659
Steel	114	773
Aluminum		
Total—Vans	2,399	15,713
Tanks		
Petroleum	350	2,495
All other	157	807
Total—Tanks	507	3,302
Pole, pipe and logging		
Single axle	43	223
Tandem axle	54	371
Total	97	594
Platforms		
Racks, livestock and stake	232	1,110
Grain bodies	91	612
Flats, all types	570	3,640
Total—Platforms	893	5,762
Low-bed heavy haulers	262	1,741
Dump trailers	178	1,178
A.I. other trailers	305	1,793
Total—Complete trailers	4,641	30,083
Chassis only	507	1,622
Total—Trailers and chassis	5,148	31,905

Source: Industry Division, Bureau of the Census.

Basis for Weight

What to count in deciding the actual unloaded weight of your vehicle is partially settled by a new Internal Revenue Service ruling. For tax purposes, says Revenue Ruling 57-340, the following should be included:

1. A tank for transporting petroleum products (but not the weight of

(TURN TO PAGE 184, PLEASE)



Comforting Companions on a stormy night!

Good weather or bad, few things are as important as dependable lighting on your rigs. You can feel confident when you use DIETZ "4-in-1" switches and turn signals to indicate turns or emergency highway stops — because you know the high quality materials used in their construction assure complete safety and dependability.

Incorporating over a century of design and engineering knowhow — Dietz switches and turn signals far exceed I.C.C. and S.A.E. requirements and carry Dietz's lifetime guarantee against defects in workmanship and materials. Good reason why 562 separate automotive manufacturers specify Dietz equipment for their vehicles.

Your nearby Dietz jobber will be glad to show you these turn signal switches and lights, and the complete Dietz line of automotive safety lighting equipment. Or write *today* for full information. R. E. Dietz Co., 225 Wilkinson Street, Syracuse 1, N. Y.

NEW DIETZ "4-IN-1" BURNOUT PROOF TURN SIGNAL SWITCHES



- **For Turning** — Operates as conventional turn signal switch.
- **For Emergency Warning** — Flick toggle switch and all four lights flash simultaneously.
- **For Stop Light—For Tail Light** — Operates in regular fashion.

The complete Dietz line of turn signal switches is *guaranteed burnout proof*. Choose either self-cancelling or non-cancelling models.

DIETZ

THE MOST COMPLETE LINE OF AUTOMOTIVE LIGHTING AND SAFETY EQUIPMENT IN THE WORLD



Turn Signals,
Switches & Flashers

Stop and
Tail Lights

Clearance and
Marker Lights

Headlights, Foglights,
Tractor Lights

Flares, Flags, Fuses,
Fire Extinguishers

Emergency Lights,
Searchlights, Floodlights

Mirrors and
Mirror Arms



INTRODUCING (from left) F. E. Jones, public relations director, Allegheny Freight Lines, Winchester, Va.; L. L. Pernot, domestic sales mgr., Four

Wheel Drive Auto Co., Clintonville, Wis.; R. C. Cheatham, assistant maintenance mgr., western division, Southern-Plaza Express

Sept. News Roundup

Continued from Page 182

pumps, hose reels, hose and meters used in handling the cargo).

2. A dump body mounted on a truck chassis.

3. A tank for hauling bituminous road materials (but not bituminous distributing equipment such as a pump and power unit).

4. Extra insulation used in truck bodies to help maintain proper temperatures for the cargo.

5. A hydraulic lift gate that also serves as the tail gate for the vehicle and therefore functions as part of the body.

For good measure, the same ruling names specific items the weights of which are not counted for tax purposes. These are:

1. Refrigeration hold-over plates.
2. Blowers and similar devices installed to permit refrigeration in transit.
3. Dry ice placed on top of the cargo.

Desk in a Truck

Help is at hand for the truck driver who needs a convenient place to fill out trip record forms. Carrying a new government patent is a writing desk that takes up very little space in the cab. It fastens to the instrument panel and can be lowered when not in use. The writing surface has clips for holding pencil and paper. Beneath this section is a storage area for documents. Everett Molinari, of Far Rockaway, N. Y., is credited with the invention.



Designed for Precision Machining Brake Drums on Passenger cars and Trucks UP TO 10 TONS!

Sliding and Revolving solid Spindle — 3" Diameter . . . cuts set-up time.

12" Spindle travel gives easier access to drum interior.

Multiple speeds and independent feeds. 1 HP Motor.

Turns AND Wet Grinds, SIMULTANEOUSLY, with Vapo-Jet WET Grinder attachment.

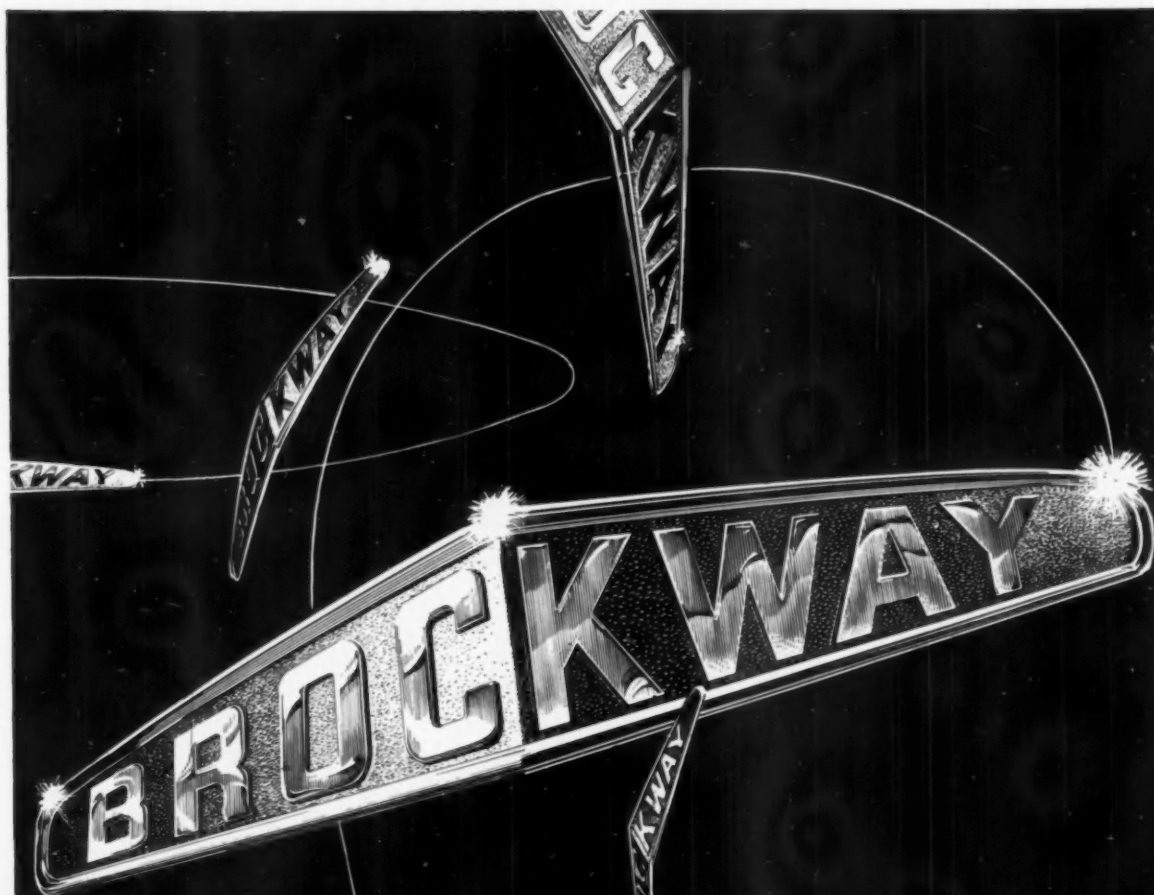
**NEW—
NO. 304**

Put this great, new, medium-priced Lathe to work in your Service Shop and you'll really see some fast, economical Brake Drum reconditioning! It means more road time, with less vehicle down-time for brake maintenance. Designed to handle brake drums on Fleet cars and Trucks UP TO 10 TONS, the new No. 304 cuts shop labor time. The Sliding and Revolving Spindle slashes set-up time in half. Van Norman's Precision Machining gives your Drums that mirror-like finish that means maximum life to linings plus good brakes.

An easy, "Pay-as-You-Depreciate Plan" for Fleets gives you a good break too! Ask for Details. Van Norman Automotive Equipment Company, Springfield 7, Mass., A Division of Van Norman Industries, Inc.

VAN NORMAN

PRECISION
VAN NORMAN IN MODERN, EFFICIENT SHOPS—EVERYWHERE!
MACHINING



WATCH OUT FOR BROCKWAY!

It's roaring into tomorrow with new plans... new energy... all on top of what the Brockway name has come to mean... a proven truck, custom-built to meet individual requirements.



A Living Legend

of the Highways for 45 years!

BROCKWAY TRUCKS

BROCKWAY MOTOR TRUCKS, CORTLAND, N. Y.

DIVISION OF MACK TRUCKS, INC.

Whatever is Finest for the Engine you get in every RAMCO Engineered 10-Up Set



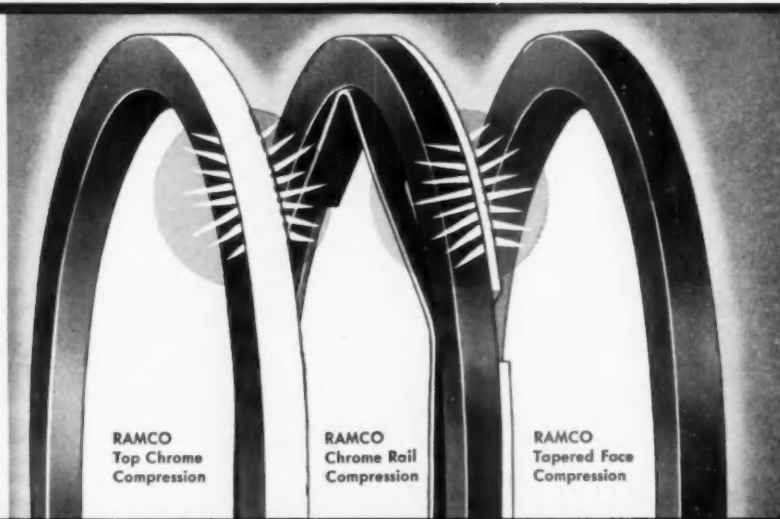
Not just one exclusive, years-ahead oil ring... but two! That is Ramco Engineering's answer for you who want the finest re-powering results. Chrome C-9 or Chrome Spiro-Seal, whichever is finest for the engine, is the oil ring you get when you call for Ramco engineered 10-Up sets. In each set, too, are advanced Ramco exclusive designed Compression rings, providing a selected combination of top chrome, chrome rail or cast-iron types to provide the finest ring performance required by the specific engine. That is why when you depend on Ramco Engineered 10-Up Sets, you are assured of everything required for Finest Get Up and GO! Ramsey Corporation, St. Louis 8, Missouri.

- FINEST** Immediate Seat-In without engine drag
- FINEST** Immediate Oil Control without wall wearing pressure
- FINEST** Complete High Vacuum Oil Control by top and bottom oil ring sealing
- FINEST** Continuing Compensation for Wear that keeps engines running like new longer
- FINEST** Longer Service Life because of Ramco's years-ahead precision engineering

Ramco chrome C-9 oil ring (left above) Years-ahead Circumferential Expansion achieved through a new Duomatic Expander design provides a new high in conformability and side sealing action.

Ramco chrome Spiro-Seal oil ring (right above) has had the Circumferential Expansion action of the Spiro-Segment for over 18 years. With its exclusive Double-Life Principle, Spiro-Seal is the most advanced design oil ring available for most of today's re-ring requirements.

Ramco years-ahead compression rings... Into each Ramco 10-Up engineered set goes just the right combination of compression rings, each embodying advanced Ramco engineering such as the RAMCO TOP CHROME COMPRESSION, with its equal pressure action; the RAMCO CHROME RAIL COMPRESSION, which double seals with chrome and cast-iron; and the RAMCO TAPERED FACE COMPRESSION, with its hairline bearing surface for immediate seating.



RAMCO 10 up piston ring sets

for **FINEST** Get UP and GO!

The Feature That Makes a Great Truck Even Greater...

The Autocar Driver Cab

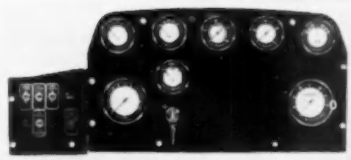


**Designed with
your driver's comfort,
safety in mind**

Cab is built like a skyscraper around a rigid structural steel frame. All welded, no rivets. Cab is spring-mounted to frame, absorbs shock, rolls with weaving. Heavy gauge sheet metal preserves that new look. All aluminum cab available; saves approximately 1/3 in weight.



Big windshield, curved to eliminate sidepost obstruction, pushes out in an emergency under 40 lb. pressure.



Instruments, grouped on panel directly in front of driver, are designed for long, trouble-free performance. Electrical terminals are clinched, soldered, and covered with rubber boot. Circuit breakers speed restoration of service in the event of a short circuit.



Extra-large rear window with optional sliding panel for ventilation; also permits driver to direct winching.



Full-Adjust Seat, adjustable at many different locations, is almost infinitely adaptable to any driver's requirements. Levers permit driver to change posture while in motion.

1. Lever moves front of seat up or down.
2. Lever moves back of seat up or down.
3. Release to move seat back and forth.
4. Lever adjusts back rest.
5. Arm rest moves up out of way.
6. Entire seat platform can be raised or lowered.

These are only four of many features that make the Autocar Driver Cab the most completely satisfactory cab for use on or off the highway. To help your drivers stay fresh during a full day's work, the same careful attention has been devoted to every detail of the cab. When you order your next truck or tractor, order it with your driver's comfort and safety in mind and buy an Autocar. See your White-Autocar distributor today.

AUTOCAR TRUCKS

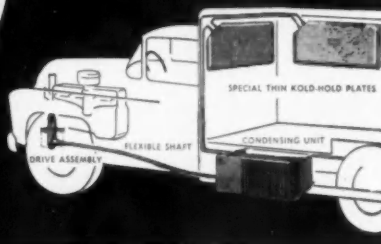
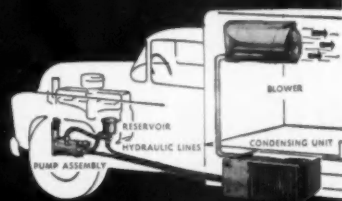
AUTOCAR DIVISION, The White Motor Company

Exton, Pa.



KOLD-HOLD® truck refrigeration

NEW
*Planning Service...
helps you analyze
your truck refrigeration
needs!*



Helps you plan

A wide range of outstanding products, supported by a unique servicing distributor program and backed by 25 years of experience qualifies Kold-Hold to help you plan your truck refrigeration program wisely. Long-range planning will give you what you need when you need it.

Helps you budget

Let Kold-Hold planning help you ward off the unexpected strains that are an ever-present danger in considering only present needs. Planning for the future can pay off handsomely in value received for your budget dollars.

Helps you get more refrigeration for your money

Analyzing your needs helps you obtain truck refrigeration tailored to your specific operations. Call on Kold-Hold to help you obtain more refrigeration for your money through a well-planned truck modernization program.



KOLD-HOLD® division **Tranter Mfg., inc.**
230 E. Hazel St., LANSING 4, MICHIGAN

... ICC Safety Questions

Continued from Page 73

We are aware that some relay-emergency (trailer) valves do operate in emergency at pressures above the range of 20 to 45 psi specified for automatic operation. This point is not covered by regulations at present, but we discourage such an arrangement whenever opportunity affords.

● In the event the body of a trailer is not the full width of the rear axle, is it necessary that the clearance lamps be installed on extensions to indicate the full width including the rear axle of the semi-trailer? I have noted a number of units on the highway transporting compressed flammable gas which do not have lights extending beyond the width of the tank.

Yes. The regulations require that clearance lamps shall, so far as practicable, be mounted as to indicate the extreme width and height of the vehicle. On some trailers this requires mounting such lamps on extensions beyond the cargo container itself.

● Are tire chains required if the vehicle is equipped with sanders?

Yes, during the time when the vehicle is likely to encounter conditions requiring chains.

● There has been recent publicity of an ICC test program concerning brakes (Aug., page 33). Does this mean you are going to change the brake regulations again, now we are just getting used to the new requirements?

No, although it does not mean that further changes will not be considered. This test program is essential to see if the present regulations are adequate and the extent to which present methods of implementing the regulations are capable of improvement.

● Some of the ICC requirements seem petty. For instance the exact tools needed to change a sealed-beam headlight. If a carrier has a logical "beef" either on a rule or the manner of its enforcement, how should he go about suggesting a change?

The rules do not specify the "exact tools" needed to change a headlight. They require "Hand tools adequate to effect replacement of lamps and fuses" (Section 193.95(e).) To obtain formal Commission consideration of a requested change, it is necessary to file a petition in accordance with the General Rules of Practice. Proposals which are non-controversial or of minor consequence may be discussed with us informally.

ACCIDENTS

● What carriers must report accidents to the ICC?

Common and contract carriers of passengers and property. This includes carriers of "exempt" commodities.

● A common carrier performs transportation between two points in Pennsylvania but uses a route through New Jersey for operating convenience only. Is an accident which occurs in New Jersey reportable to the ICC? Is there any difference if the above was a private carrier?

Yes. Transportation between two points in the same state, if through another state, is defined as interstate transportation.

Private carriers do not report accidents to the ICC under present regulations.

● A truck is dispatched to a loading point for an interstate pick-up. Before it arrives at the loading point, the pick-up is cancelled and the dispatcher so advises the shipper at loading point. Meanwhile the unit is involved in an accident. Is this accident reportable to ICC?

A truck traveling to a pick-up point for the purpose of loading a shipment for interstate transportation is performing a service in connection with interstate commerce. The operation is subject to the Safety Regulations including accident reporting requirements. The fact that such service need not have been performed in light of cancellation of the pick-up before the truck reaches the pick-up point does not appear to change this responsibility.

● A unit is dispatched on an interstate trip to load in another state and is involved in an accident before he gets out of the state from which he is dispatched. The damages amount to \$25 and the driver is injured. Is this accident reportable to ICC?

Yes.

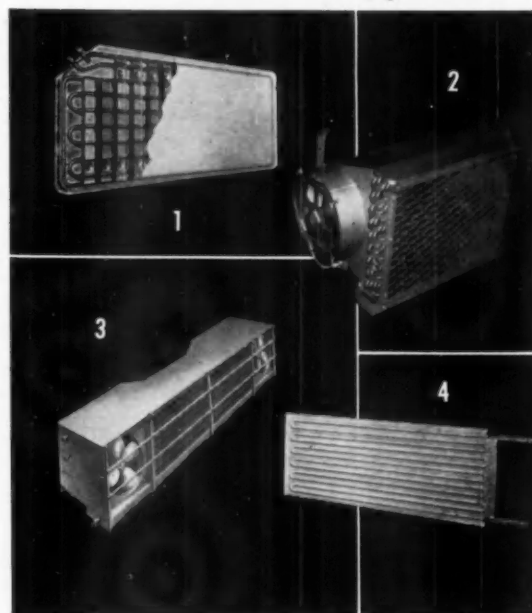
● Do you have a basic recommendation which motor carriers could possibly follow to improve safety performance?

Yes. We believe the vital need is for more precise instruction as to methods and more complete indoctrination as to principles with respect to supervisors and inspectors immediately in charge of vehicle inspection and dispatching drivers. If these people were adequately instructed and thoroughly impressed with the importance of their job, safety performance would be improved.

END

Please Resume Reading Page 74

KOLD-HOLD® LOW SIDES for low-cost refrigeration



1. KOLD-HOLD® HOLD-OVER PLATES

These streamlined plates are dividend designed to produce more refrigeration and produce it faster than any other plate on the market. Full capacity and rapid pull-down assure dependable product protection.

2. KOLD-HOLD® TURBO-JET BLOWER

The first blower to achieve full efficiency over the entire coil surface, this unit also moves more air faster because of fan placement and shrouding. It gives faster pull-down, takes less space, weighs less.

3. KOLD-HOLD® SUPER BLOWER

Fans at each end of this unit move air down both sides of the truck body to surround the load with cold air. Only 70½" wide, 15⅝" deep and 12" high, it gives more payload space and working area.

4. KOLD-HOLD® SERPENTINE PLATES

These quick-action plates save space and weight where hold-over capacity is not essential, and provide the equivalent of 100% prime surface.

Analyzing your needs

Kold-Hold has the experience to help you analyze your needs and the products to meet your needs, whether they are for hold-over or for continuous refrigeration. Make Kold-Hold your headquarters for truck refrigeration.

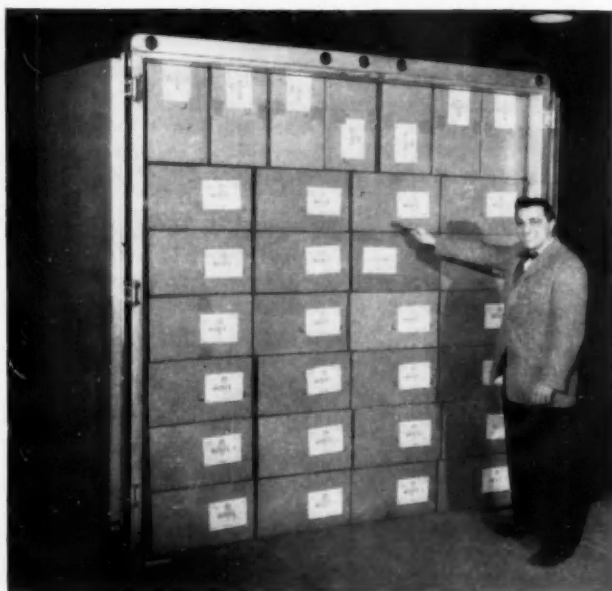


KOLD-HOLD® division Tranter Mfg., inc.
230 E. Hazel St., LANSING 4, MICHIGAN

Lombard loads 16% more in Trailmobile **LO-LEVEL** vans



Loadings for U.S. Rubber, Footwear Division,
average 16% higher by volume
than drop-frame loadings



"Our new Trailmobile Lo-Level vans are paying for themselves on hauls for U. S. Rubber Footwear Division", says Nick Lombard, Jr., Waterbury Terminal Manager for Lombard Bros., Inc.

"We're loading more than we were formerly able to get in drop-frames and considerably more than we could accommodate in straight floor trailers. In fact, I'd say two Lo-Level vans will do the work of three conventional straight floor vans."

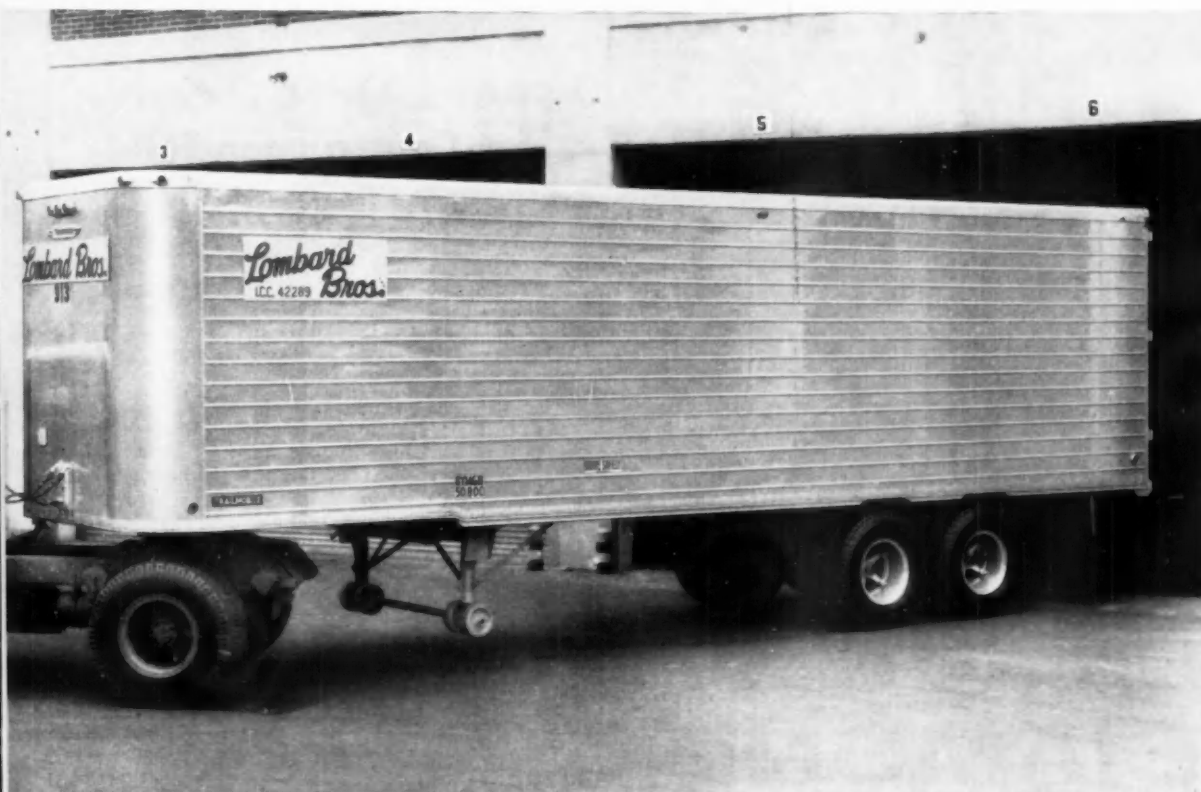
"Moreover, all of our shippers like Lo-Level's big capacity and straight floor loading features. Because lift trucks can go all the way in, we've

Securely packed from floor to roof.

Nick Lombard, Jr., indicates Trailmobile's big capacity in this view showing a fully loaded Lo-Level van at the Footwear plant of the U. S. Rubber Company. "It's easy to see how we're hauling more per load for this customer", says Nick.



eliminat
there's
prevent
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and unl
a real c
shippers



"Straight as a string from dock to nose."

This is how Al Ragozzine, Lombard's maintenance superintendent, describes Lo-Level's ideal dock height and straight floor features. "With Lo-Level's the trailer floor is just like a smooth extension of your dock. There's no step-down to get into the trailer and no step-up to get to the nose." He is shown here (at right) with Mr. A. H. Nelson, U. S. Rubber's Traffic Manager.

eliminated double handling at the front—and there's never any need to shore up cargo to prevent damage in transit."

"One more point. We found that the Lo-Level upper fifth wheel allows tractor coupling at all angles up to 90° without damage to bolsters—a big advantage in tight, crowded loading areas."

"So by often accommodating substantially more freight and by saving time and labor in loading and unloading, these Lo-Level vans are making a real contribution to the service we offer our shippers."

TR-621



CID LO-LEVEL
*Customer Individual Design

TRAILMOBILE INC.

Cincinnati 9, Ohio • Berkeley 10, California • Springfield, Missouri • Longview, Texas



FWD Adds New Carrier for Construction Field

A NEW LINE of FWD commercial carriers for crane, shovel, back-hoe and dragline manufacturers has been introduced by Four Wheel Drive Auto Co., Clintonville, Wis.

The primary unit is a 15-ton, 6 x 4 model. Other units in the line include 25- and 30-ton models, and the company will design other sizes to meet individual manufacturers' requirements. FWD is also offering its heavy-duty axles for use in production of four-wheel-drive wagon cranes.

FWD is offering its new line of commercial carriers in a range of engine and wheelbase options to coincide with the varying needs of crane, shovel, back-hoe and dragline manufacturers. Engine options include 150-horsepower BD-308, 212-horsepower RD-501 and 216-horsepower 145GK gas engines plus several diesel models in the same horsepower ranges. Five or 10-speed transmissions are available. All carriers have removable sliding outriggers.

Carrier construction features all-steel, one-man cab alongside engine styling and heat-treated channel steel frame, reinforced throughout for increased torsional strength but with weight maintained at minimums to meet state regulations. Basic FWD carrier drive system is 6 x 4 with independent power to each of the two rear axles. The FWD line also includes carriers with six-wheel drive, featuring the patented FWD power-proportioning center differential, for specific applications.

Century

now factory standard

on new

DIAMOND T

Model 831 LPG Trucks



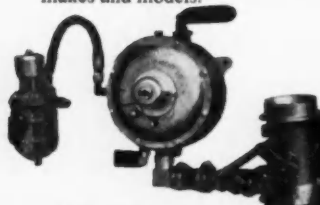
Important advantages are gained by standardizing on Century 3C carburetion. Easy starting, smooth idling, constant power and speed, superior performance, and maximum economy in any service are assured. Each carburetor employs Century's exclusive metering valve system which is factory-calibrated and preset to the performance curve of the engine, to provide ideal fuel-air mixtures for all operating conditions.

Performance is not affected by changes in temperature or altitude.

Selected as standard on Diamond T Model 831 LPG trucks is the Century 2½ inch single throat carburetor with built-in Holley governor, a Model K-4 converter, and a 12-volt filter-fuellock.

Century carburetors for conversion or replacement are available for all makes and models.

Write for complete information today.



CENTURY GAS EQUIPMENT CO.
6855 E. Rosecrans Ave.
Paramount, Calif.

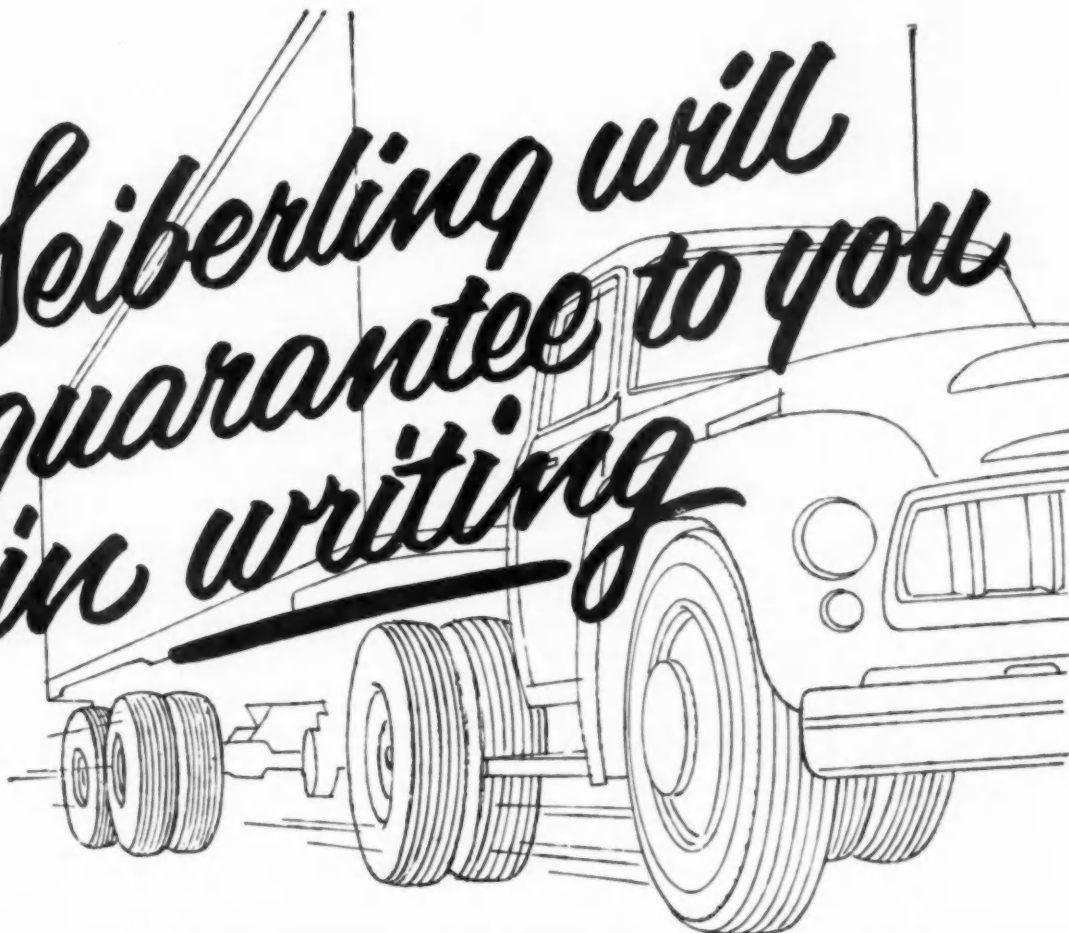
CENTURY

LP-GAS CARBURETION



"Uphill I don't expect so much, but it has developed a sluggishness going down hill."

*Seiberling will
guarantee to you
in writing*



... A LOWER COST PER MILE

Seiberling truck tires will give you a lower cost per mile than any tire of any make that you have ever used. This is a statement of fact, guaranteed to you in writing by Seiberling Rubber Company and backed by Seiberling's 36 years of integrity and skill in manufacturing quality truck tires.

We will prove it to you on your fleet, with our "Two and Two Test" fitted to your fleet operation. Send in the coupon today.

Mr. L. M. Seiberling
Vice President in Charge of Sales
SEIBERLING RUBBER COMPANY
Akron 9, Ohio

Please send your representative, and prove to me that I will reduce my tire costs with Seiberling tires.

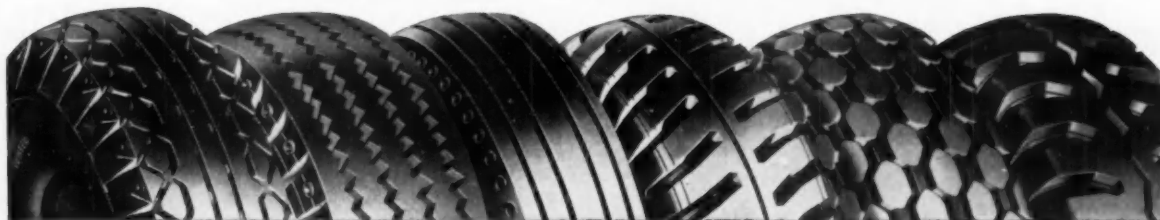
Name _____ Title _____

Firm Name _____

Address _____

Street City Zone State

SEIBERLING RUBBER COMPANY



A TIRE FOR EVERY ROAD AND LOAD

NEW

PRODUCTS

DESCRIBING RECENTLY ANNOUNCED PRODUCTS AND EQUIPMENT OF INTEREST
TO MEN CONCERNED WITH TRUCK, BUS AND CONSTRUCTION FLEET MANAGEMENT

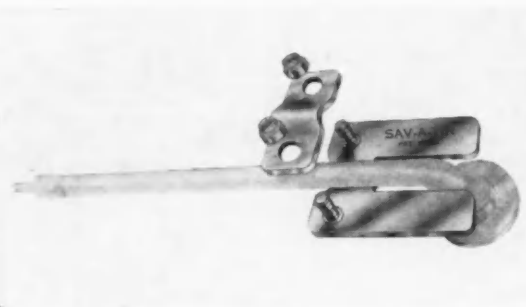
As a special service, complete address of each source is included so readers
may save time—write directly for further information on products described



Brake Lining Groover

from Ammco Tools, Inc.
2100 Commonwealth Ave.
North Chicago, Ill.

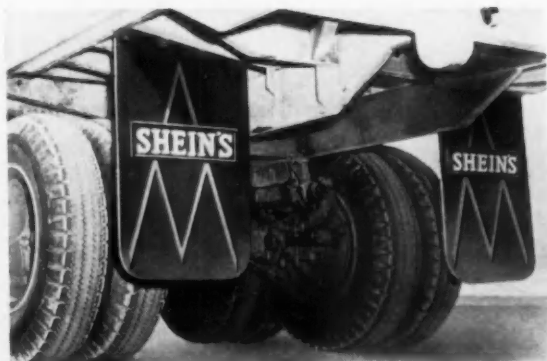
has been designated Model No. 4550 and is an attachment for the Ammco Model No. 2000 "Safe-Arc" brake shoe grinder. It is used to put $\frac{1}{2}$ or $\frac{3}{8}$ -in. grooves in linings when the manufacturer recommends grooving the lining down the center.



Valve Stem Clamp

from Trailmobile Inc., General Service Dept.
31st and Robertson Ave.
Cincinnati 9, Ohio

known as "Sav-A-Tir," locks the valve stem in stationary position to prevent the stem from being pulled inside when the tire goes flat. It also reduces the possibility of tire fires by securing the tube through its lock on the stem. They are distributed nationwide by all Trailmobile Inc. branches.



Splash Guards

from Acme Rubber Co.
115 Meade St.
Trenton 3, N. J.

are available personalized by having the name of the fleet operator or shipping company embossed in white rubber letters. Meeting most states' requirements, Acme splash guards cover dual wheels and come in 24 x 20, 24 x 30 and 24 x 36 $\frac{1}{2}$ -in. sizes. The guards are made with overlaid strips of heavy conveyor-belt duck sandwiched lengthwise between two layers of ground tire cord rubber composition.

Tailgate Loader

from Curtis Automotive Devices, Inc.

P. O. Box 232

Bedford, Ind.

has a 1000-lb capacity, mounts on any make or model of $\frac{1}{2}$, $\frac{3}{4}$ or one-ton truck without cutting or alterations to the truck body. Known as the "Master Loader," it is offered in two models—Model No. P-1000 for express body trucks with a 54 x 28-in. platform weighing 325 lb and Model No. S-1000 for stake body trucks with a 78 x 28-in. platform, weighing 450 lb. "Master Loader" is raised by torque-type arms that lift the load straight up.

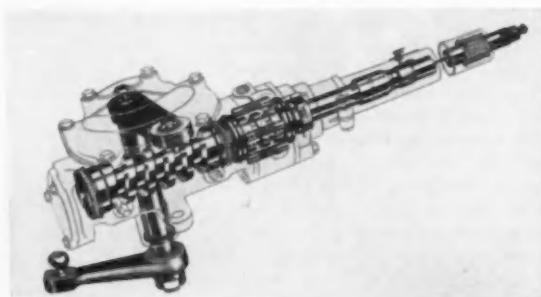


Power Steering Gear

from Ross Gear & Tool Co., Inc.

Lafayette, Ind.

in two semi-integral models has been added to the line of Ross "Hydrapower" hydraulic power steering. Designated as Models No. HPS-52 and No. HPS-70, the units offer the chassis engineer installation versatility of the power cylinder, permitting easy, space-saving placement without interference with other components, says Ross. They use the same type of mounting used with mechanical steering gears.



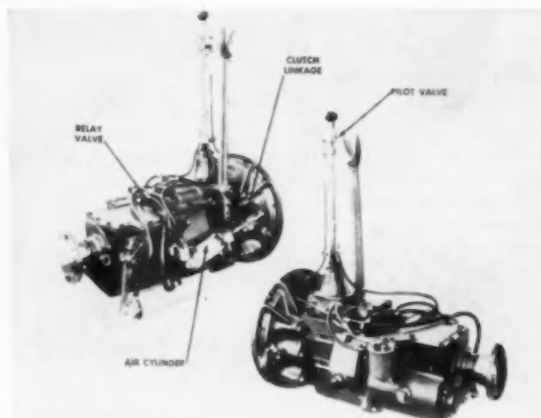
Air Power De-Clutch

from Fuller Mfg. Co.

Transmission Division

Kalamazoo, Mich.

is for Models No. R-46, R-96 and R-960 "Road Ranger" transmissions. It is used for releasing and engaging the clutch while the vehicle is in forward motion, without the use of a clutch pedal or the addition of any substitute motion on the part of the driver. Operating from the vehicle air system at full line pressure, the power de-clutch employs only a pilot valve, relay valve and air cylinder connected by the required lines, hoses, fittings and clutch linkage.



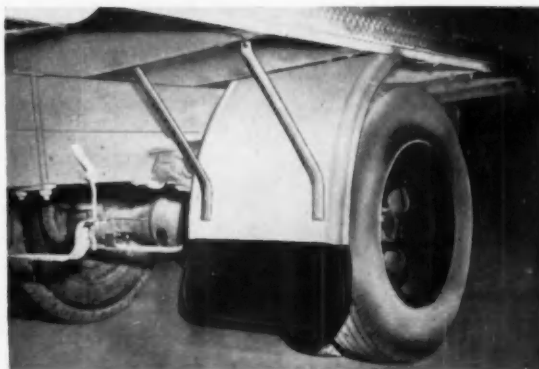
Contour Splash Guard

from Saf-T-Fend Division

Paramount Truck Body Co.

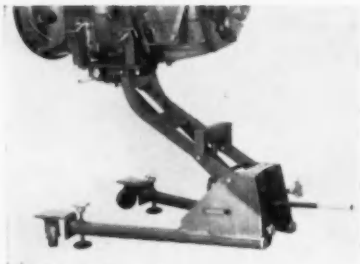
Chicago, Ill.

meets the Illinois regulation requiring truck owners and operators to fit trucks with contour mud fenders. A one-piece model, the "Saf-T-Fend" can be installed by one man in a matter of minutes, says the manufacturer. It has a 2½-in. crimped fender lip and special crown-top design for strength; specially treated cord rubber flaps banded with a 1 x 1-in. steel brace; and two 1 x ¼-in. half oval steel braces. The fender is fully undercoated.



New Product Descriptions

Continued from Page 195



Transmission Dolly

from Cam Tool Co.
1038 Larkin St.
San Francisco 9, Cal.

is especially designed as a time and labor saver in handling of heavy-duty truck transmissions and differentials, says the manufacturer. Hold-down pads on each leg eliminate roll-around action and sliding platform which tilts as required provides the only necessary movement. Hydraulic jack mechanism controls the forward movement and heavy springs return the platform to position. It is rated at 1500 lb.

Brake Hole Cover

from EIS Automotive Corp.
Middletown, Conn.

is manufactured entirely from molded rubber. It is designed to fit all thicknesses of Bendix type dust shields. The brake adjusting hole covers are universal in application.

Brake Drum

from Motor Wheel Corp.
Lansing 3, Mich.

eliminates the possibility of heat checks in the inner iron braking sur-

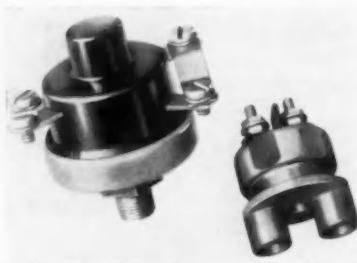


face breaking through because of "Centrifuse" construction, says the manufacturer. Steel, rather than cast iron, is used in the drum back, reducing weight as much as 25 per cent, yet increasing strength. It has heavy rib design to dissipate heat faster to lessen brake fade.

Stop Light Switch

from Midland Steel Products Co.
Owosso, Mich.

actuates trailer stop lights when brakes are applied by emergency controls. The double throw switch fits all truck-tractors and operates in



conjunction with the standard stop-light switch currently installed in vehicles equipped with air brakes. Another switch introduced by Midland is a vacuum suspended stop-light throw for combinations equipped with vacuum braking systems. Both meet requirements of ICC emergency brake regulations.

Winch Kit

from Braden Winch Co.
Broken Arrow, Okla.

is designed especially for front end installation on GMC series 100 four-wheel or two-wheel drive chassis. The kit consists of an 8000-lb capacity winch with all necessary mounting and driving parts.

Reclining Seat

from American Seating Co.
Transportation Seating Division
Grand Rapids 2, Mich.

uses a new design. It offers four reclining positions. Called the Model No. 500 "Recliner" by the manufacturer, it meets the demands for a lounge chair with contoured, full-



depth foam-rubber seat cushion and back. Other features on the bus seat include magazine pockets, foam-rubber arm supports and stainless steel kick plate.

Trailer Floor

from Aluminum Co. of America
1501 Alcoa Bldg.
Pittsburgh 19, Pa.

uses two novel designs in extruded aluminum for either refrigerated or dry-freight vehicles. The flooring uses aluminum alloy No. 6063 to provide light-metal truck beds. Reefer floors, varying in width from 82 to 90 in., may be installed by using combinations of five different extruded shapes. Hard rubber end plugs are inserted in open ends of extrusions to prevent moisture from reaching underlying insulation.

Engine Oil

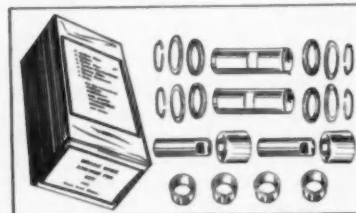
from Pennsylvania Refining Co.
2686 Lisbon Rd.
Cleveland 4, Ohio

is specially refined for all types of two-cycle engines. The manufacturer says it is fortified against plug fouling and engine wear and will not form crankcase deposits.

Anchor Pin Sets

from Specialty Products Co.
619 South Matlack St.
West Chester, Pa.

are packaged as one set of brake shoe parts for one side of the axle. Sets



(TURN TO PAGE 198, PLEASE)

Buy a 1/2
Universal
only \$2.50
bonus th
high pric
Don't
your CP
for a FR
Reversib
its paces
shop. Yo
PACEM
handling
frozen, r
how its s
spots. Th
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Pacesetter

**ELECTRIC
WRENCH**

**HAS BONUS CAPACITY
... AT BUDGET PRICE!**

\$99⁵⁰

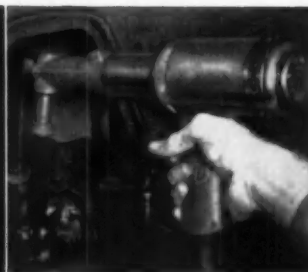
Buy a 1/2 inch square drive PACESETTER Universal Electric Impact Wrench for only \$2.50 a week* and you get a power bonus that puts it in a class with high priced tools!

Don't just take our word for it... call your CP Jobber or mail the coupon below for a FREE demonstration. Then put the Reversible PACESETTER through its paces on some tough jobs in your shop. You'll really go for the PACESETTER's powerful yet easy handling "feel" as it whips off frozen, rusted nuts. You'll be amazed how its slim nose gets you in tight spots. The CP-724 PACESETTER has 3/8" - 5/8" bolt size capacity for regular work; the CP-725 PACEMAKER at \$135 is available for heavy-duty service where greatest stamina and reserve capacity is desired.

*Through Jobbers Participating in CP Time Payment Plan.

IN-HANDLE REVERSE SWITCH permits the one hand that holds the wrench to snap it into reverse! An interlock prevents reversal when motor is running.

The Attachable Angle Head, at right, becomes part of the tool. You can run nuts around blind corners.



**CALL YOUR JOBBER
OR MAIL COUPON, TODAY! ▶**

Chicago Pneumatic

8 East 44th Street, New York 17, N. Y.

AIR AND ELECTRIC IMPACT WRENCHES • ZIP-GUNS
PNEU-DRAULIC TRUCK JACKS AND PUMPS • BEAD BREAKERS

Chicago Pneumatic Tool Company, Dept. A-61
8 East 44th Street, New York 17, N. Y.

- ☐ Please arrange FREE DEMONSTRATION. No obligation.
☐ Please send me FREE Pacesetter literature.

Name _____

Company _____

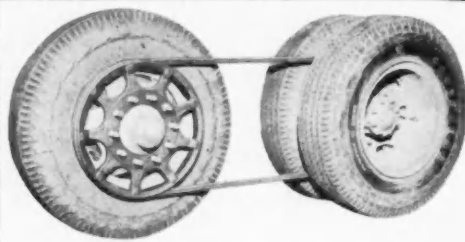
Address _____

City _____ Zone _____ State _____

Fleet Owners ...

- double tire mileage
- increase payloads

with
**STERKEL
TANDEM
V-BELT
DRIVE**



The patented Sterkel Tandem V-belt Drive consists of 24" precision-machined sheaves placed between standard dual wheels and is driven by a 1½" V-belt made with a specially designed high tensile member. Belts are supplied in matched sets. The drive works on both trailing and pusher tandems, is available for Budd and Spoke type wheels, and does not require any additional horsepower. The sheave incorporates a de-icer band for all-weather operation.

PROVED PERFORMANCE under year 'round weather conditions

Many fleet owners have tested the Sterkel Tandem V-belt Drive under all types of driving and weather conditions...and as a result have ordered, and reordered for their fleets. Also, many of them are specifying new equipment with Sterkel drives.

Operators Report These Advantages

"Up to 3 times more tire mileage"

"Freer rolling than tandem drive differentials...results in better fuel mileage"

"Gives operator the advantages of tandem drive differential with operating cost of single axle drive tandem"

"Better traction in all weather conditions; lessens need for tire chains; big savings year 'round"

"Light weight of drive increases our payload"

(Complete drive, including 4 sheaves and 2 belts, weighs only 193 pounds, saving up to 1000 pounds compared to other types of tandem axle drives)

Patent No. 2,733,612

WRITE, WIRE OR CALL
for complete information and name of your local distributor.

**STERKEL, 3750 BRIGHTON BOULEVARD
P.O. BOX 2671, DENVER, COLORADO**

**STERKEL
TANDEM
V-BELT
DRIVE ***
MFG. INC.
*Warranted

New Products

Continued from Page 196

are available for cast iron shoes No. APK-1 and pressed steel shoes APK-2. According to the manufacturer, the sets are designed to save time looking for parts and in remembering parts numbers.

Mushroom Discs

from Behr-Manning Co.
Troy, N. Y.

are designed for contour grinding or polishing in small radii or difficult



contours with portable tools. Pads are mushroom-shaped molded rubber, and the discs are coated with an abrasive in 5 and 8-in. diameters.

Nylon Filters

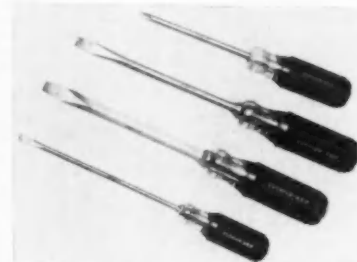
from Danielson Mfg. Co.
Danielson, Conn.

designed to withstand rush and corrosion, are all nylon construction. The filters are custom-molded in types, sizes and shapes to meet specific filtering requirements—for lube, diesel and hydraulic oils, water, gasoline, etc.

Screwdrivers

from Bridgeport Hardware Mfg. Corp.
Scofield Ave.
Bridgeport, Conn.

have neoprene rubber grip permanently bonded to an amberlite handle. The grip is unaffected by water, oil and gasoline, says the manufacturer.



(TURN TO PAGE 202, PLEASE)

HUM
product
of irreg
For the
Vernon

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or in th

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In Indu
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HUMP-BACKED CARGO — Brown & Brown, Inc. of Mobile, Alabama, manufacture a wide variety of canvas goods products, and often use their own trucks for transporting raw materials to their Mobile plant. Frequently, these loads consist of irregularly shaped products that must be hauled on open top trailers, subjecting cover tarps to the most severe kind of use. For their own trucks, these experienced canvas goods manufacturers rely on huge, finely tailored tarps made from Mount Vernon duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc. and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

UNIFORMITY
Makes The
Big Difference
In Industrial
Fabrics

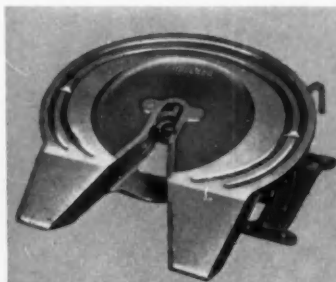


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A LEADER IN INDUSTRIAL TEXTILES

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THERE'S A HOLLAND FIFTH WHEEL



1000-SW-36 — OVER HIWAY
STANDARD



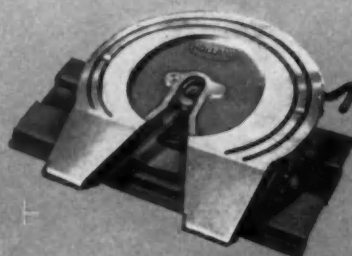
3300-36 — OVER HIWAY



1500-36 — HEAVY DUTY
OVER HIWAY



FW 100 — EXTRA HEAVY DUTY
OFF HIWAY



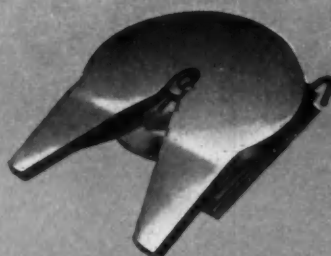
1060-SW-36 — UNIVERSAL
SIDE OSCILLATING



1560-36 — HEAVY DUTY
SIDE OSCILLATING



3070-36 — HOLLAND — APGAR
TRAILERMASTER



950-S-30 — LIGHT DUTY
4 TON CAPACITY



1226-36 — DOLLY 5TH WHEEL

HOLLAND

OVER 200,000 ARE ON THE ROAD TODAY

TO FIT EVERY OPERATION . . . BUT

Call Us

If You Need

A Different One!



There are more different Fifth Wheels in the Holland line than you can find anywhere else, and for very good reason. No single Fifth Wheel can meet all trucking requirements; these requirements vary from job to job, and each job calls for its own particular Fifth Wheel. Whatever is the prime consideration, Holland Hitch has the right Fifth Wheel to best satisfy the demand. And if the demand goes beyond what already is in the most comprehensive line of Fifth Wheels in the world, then Holland will engineer one specially for the problem. Holland Hitch is the word for Fifth Wheels, — but it is even more the word for the most complete, most experienced, and most cooperative engineering service in the industry.

HOLLAND HITCH COMPANY
HOLLAND—MICHIGAN

**For Over 50 Years Devoting
Our Time And Manpower To The
Manufacture Of Fifth Wheels
And Allied Gear Exclusively!**



5th WHEELS

SALES AND SERVICE EVERYWHERE IN THE U.S.A.

Another Trucking Hotel

Scheduled to open this month, the Motor World West Hotel is designed especially for the trucking industry. It is located at 5255 West 47th St., Forest View, Ill. Built at a cost of \$400,000 this air-conditioned, fireproof brick and stone hotel will offer accommodations for 100, ranging from double bedrooms to executive rooms and suites. It will bring to the Clearing Industrial Section service similar to that pioneered by Motor World Hotel, 5300 South Pulaski Road, Chicago, Ill., which opened in January, 1956, as the nation's first hotel specializing in service for the trucking industry.



HOW to Safely Repair TRUCK TUBELESS TIRES

Always
use this
Approved
"DEEP CURE"
METHOD

DILLECTRIC
Electrically Vulcanized Repairs
FOR PUNCTURES IN TIRES UP TO 14.00

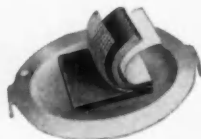
1 BUFF thoroughly to completely remove all graphite, mica and soap lubricants. Do not buff through liner.

2 THREAD puncture hole with filler rubber to prevent fabric deterioration from moisture.

3 APPLY "Dillectric" Nylon Patch and vulcanize with Dillectric No. 6685 and "U" Clamps.

Safety should never be sacrificed for "short-cuts"

**NYLON
Reinforced
PATCH**
No. 6626-25



Reinforced with over 1500 inches of Nylon filament woven into a square mesh fabric. Provides vital strength for tubeless tire repair safety.



"U" CLAMP

**Order No. 6691-G
DILLECTRIC "U" CLAMP OUTFIT**

Includes truck tire "U" Clamp with secondary and ground wires. No. 6633 Buffer Kit. No. 5213-T Threading Tool, No. 5218 Pressure-Lube Gun, and package of 25 No. 6626-25 Dillectric Nylon Patch Units with Filler Rubber.

*Order from your supplier or
write for complete details.*

THE

DILL

MANUFACTURING COMPANY

700 East 82nd St., Cleveland 3, Ohio

New Products

Continued from Page 198

Other features are polished hardened alloy tool steel blade; solid, bolstered winged shank; precision cross-ground point.

Suspension Lube

from Amalie Division
L. Sonneborn Sons, Inc.
Franklin, Pa.

for both ball joint and torsion bar type is offered under the name "Amalie Black Velvet" ball joint suspension grease. It is formulated from a heavy-duty, water-resistant chassis lubricant fortified with load-carrying and corrosion-resistant additives.

Steam Cleaners

from Kelite Corp.
91 Industrial Rd.
Berkeley Heights, N. J.

are being offered in a three-model series. Mark I, designed for light to medium duty, has a 120 gph output,



(TURN TO PAGE 204, PLEASE)



USS COR-TEN steel reduces weight increases durability and serviceability in Boyertown truck bodies

THE DESIGN ENGINEERS at Boyertown Auto Body Works of Boyertown, Pa., have many reasons for selecting USS COR-TEN high-strength, low-alloy steel for their truck bodies. A 30% weight saving is probably the most outstanding advantage. COR-TEN steel also offers increased resistance to rust and atmospheric corrosion.

USS COR-TEN steel has excellent weldability, and its use results in a stronger, tougher, longer-lasting truck body. And the greater fatigue resistance and higher strength of COR-TEN steel combine to impart a "flexibility" to the body and frame that permits them to "give" slightly rather than break at sudden shocks.

.....

The Boyertown truck body featured in the accompanying illustration has been purchased by the General Baking Company, New York, N. Y., and is in wholesale delivery use. It is one of large fleets of similar trucks serving wholesale and retail outlets in 31 states and the District of Columbia. This particular body is the 12-foot model, 144" x 74" x 71", which has a 1½-ton capacity. The United Baking Company, too, has found many advantages in truck bodies built of USS COR-TEN steel. High strength steel permits a greater flexibility in design than carbon steel because of its lighter weight and greater strength. The "plus factor" in design

means greater payload, easier accessibility to the cab and easier loading.

The baking and bread business is a most competitive occupation. Bread trucks must never fail to make deliveries. This factor places great emphasis on route trucks, and only vehicles that are completely dependable, not easily put out of commission, and quickly and simply maintained, can be utilized. And, compared to carbon steel, high strength steel bodies are lighter, stronger and more durable, providing less maintenance through greater strength and corrosion resistance.

United States Steel Corporation, Pittsburgh • American Steel & Wire Division, Cleveland • Columbia-Geneva Steel Division, San Francisco
National Tube Division, Pittsburgh • Tennessee Coal & Iron Division, Fairfield, Ala. • United States Steel Supply Division, Warehouse Distributors
United States Steel Export Company, New York

USS COR-TEN HIGH STRENGTH STEEL

"USS" and COR-TEN are registered trademarks



UNITED STATES STEEL

Big Tire Service

B. F. Goodrich Co. is now using trucks like these to service construction contractors in the field. Built to handle large earthmover tires, the International four-wheel drive models are rated at 15,000 lb GVW. They have 11.00 x 20 tires, 201-in. wheelbase and can carry up to three 24.00 x 29 or two 37.5 x 33 tires. Equipment includes an air compressor, power tools, floodlights, a 5000-lb crane and hydraulic levelers at the rear which stabilize the truck while lifting or servicing.



Sturdy... Dependable

GROTE CLEARANCE

AND

MARKER LAMPS

"All's clear Port and Starboard"

Grote Clearance and Marker Lamps are available in armored, round, streamline and beehive types. Surpass all S.A.E. and I.C.C. requirements. Constructed for rugged, heavy-duty use. Withstand shock, resist lens breakage. Highest quality Grotelite lens insure bright, dependable identification.

Insist on GROTE lamps. See your Jobber today, or write for catalog and prices.



Lamps • Directional Signals • Reflectors • Flares • Mirrors
Distributed throughout the U. S. and Canada

THE GROTE MANUFACTURING CO., INC., Bellevue, Ky. • Opposite Cincinnati

New Products

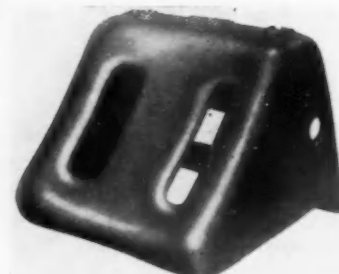
Continued from Page 202

Mark II for medium to heavy duty, has a 200 gph output; and Mark III, with an output of 300 gph, is designed for maximum duty. The output of all three is rated at 320 deg F.

Wheel Block

from Calumet Steel Castings Corp.
Hammond, Ind.

is called the "Jet" Model No. WB17. Made of high strength cast steel, it is adapted for stake and panel truck,



passenger vehicles and small aircraft, as well as for wheel-mounted drills, compressors, generators, welding machines and pumps where blocking is required.

Transistorized Mike

from Shure Brothers, Inc.
222 Hartrey Ave.
Evanston, Ill.

in hand-held design for mobile communications equipment, is designated the "Transistorized Ranger" (Model No. 505T). It features a built-in transistor amplifier and is a controlled magnetic mike designed to replace older carbon units.

(TURN TO PAGE 206, PLEASE)



When running tires get piping hot they need what Super Rayon's got!

In today's driving, passenger tires average 225°, truck tires 300°.
Hot enough to boil water, hot enough to roast tires!

No tire cord made stands up to driving heat like Super Rayon.
It's the most stable, most flexible of all tire cords, at all temperatures.
That's one of a lot of advantages in Super Rayon that you as a
fleet operator should know about and profit from!



AMERICAN VISCOSE CORPORATION
350 Fifth Avenue, New York 1, N. Y.



LAST LONGER. Tough new Super Rayon gives a tread wear bonus of 7 to 20%, yet rayon tires cost less!



LESS DOWN TIME. Super Rayon doesn't soften with heat. Resists annoying flat spots, chunk-outs, tread cracking.



RETREADS BETTER. Since Super Rayon doesn't "grow" at high temperatures, extra steps are eliminated.

New Products

Continued from Page 204

Vibrator Replacement

from Transval Engineering Corp.
10401 Jefferson Blvd.
Culver City, Cal.

for two-way mobile radio communications equipment is transistorized and has no moving parts. It has the capacity necessary to operate both the

transmitter and receiver units, according to the manufacturer. The unit is designed for 12-volt systems and is capable of switching over 9 amps DC. It operates on both positive and negative sources.

Magnet Leeches

from Magnaflux Corp.
7300 West Lawrence Ave.
Chicago 31, Ill.

enable one man to perform "Magnaflux" and "Magnaglo" testing operations that formerly required two men.



The Model No. 54975 leeches consist of a permanent alnico magnet, cast steel pole pieces with an aluminum carrying handle, and 5 ft of 2/0 cable.

Transmission Jack

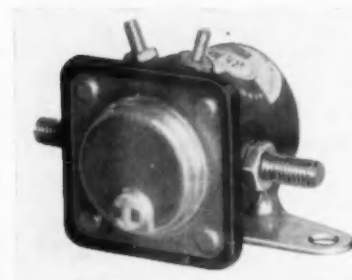
from Walker Mfg. Co.
1201 Michigan Blvd.
Racine, Wis.

has a one-ton capacity and has been designated Model No. 49 Uni-Cradle. It has been designed for servicing heavy duty transmissions, differentials and torque converters by one man. Tilting adjustments allow lifting head to tilt 10° forward, backward and to each side. It is furnished with a universal lifting head, and two adapter heads are available—for Allison Torqmatic transmissions and for truck differentials.

Solenoid Switches

from Arrow Armatures Co.
11½ Fordham Road
Boston 34, Mass.

are used for contact in dashboard push button or ignition key system



applications. They are exact original equipment duplicates with full current-carrying capacity and will fit perfectly, says the manufacturer.

Battery Charger-Testers

from Marquette Mfg. Co., Inc.
307 East Hennepin Ave.
Minneapolis 14, Minn.

incorporate silicon rectifiers which enhance the power conversion efficiency. (TURN TO PAGE 208, PLEASE)

forget about demurrage!

LEASE

the oxygen and acetylene cylinders you need

Your LINDE Distributor has a moneysaving plan under which you can lease LINDE Oxygen and PREST-O-LITE Acetylene cylinders. Under this plan, you get the cylinders you want, when you want them, where you want them, and as many as you need — and never get a bill for demurrage. TWO SIZES EACH OF OXYGEN AND ACETYLENE CYLINDERS ARE AVAILABLE. Choose between oxygen cylinders of 80 or 150 cu. ft. capacity and acetylene cylinders of 60 or 133 cu. ft. capacity. Select the combination that best meets your needs.

Cylinders Are Reserved for You. When your leased cylinders are empty, simply exchange them for full ones. No waiting to have the empties refilled. All the gas you need is always available.

Your Initial Cost is the Only Cost under ordinary circumstances. LINDE COMPANY maintains your cylinders against normal wear and inspects them periodically at no cost to you.

SEE YOUR "LINDE" DISTRIBUTOR today and ask about a cylinder lease plan to fit your needs. Or write LINDE COMPANY, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: LINDE COMPANY, Division of Union Carbide Canada Limited, Toronto.

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide Corporation.

A COMPLETE LINE OF SIGNAL FLASHERS *for Fleets*

"UP" designation means flasher is interchangeable with flashers of the same part number series.



TUNG-SOL SIGNAL FLASHERS

6-Volt Passenger Car and Light Truck

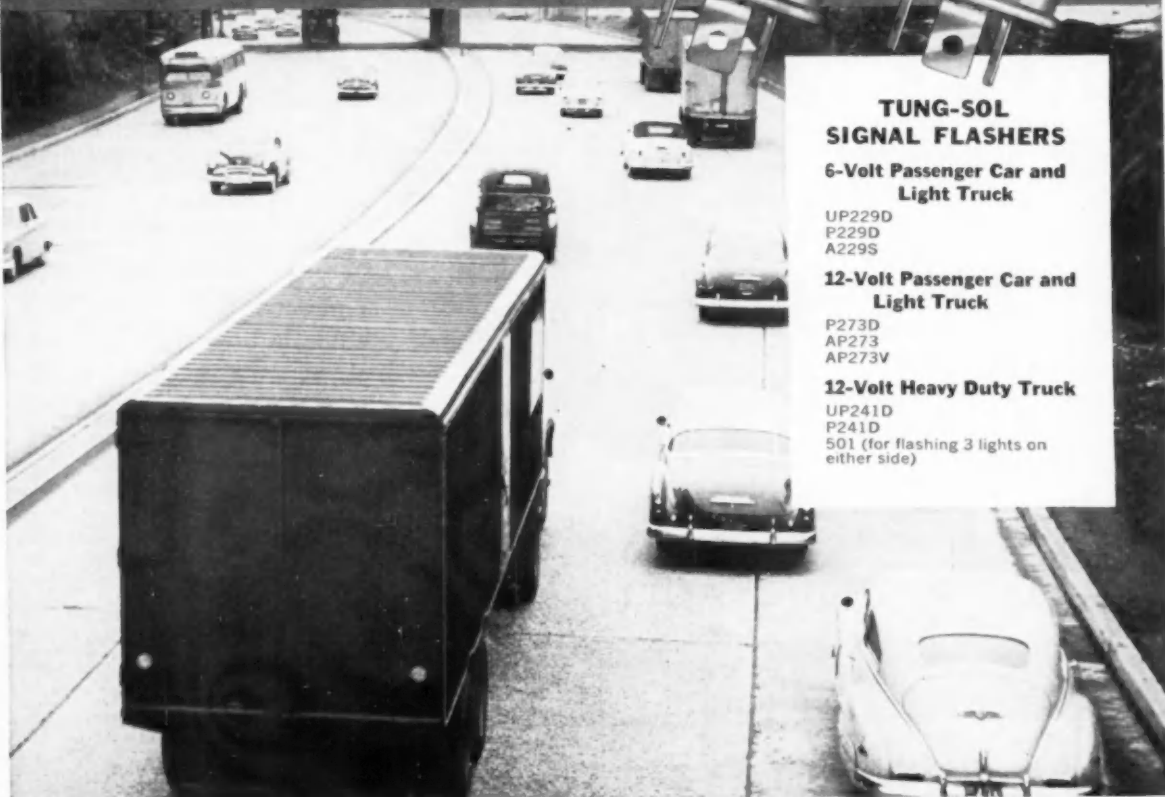
UP229D
P229D
A229S

12-Volt Passenger Car and Light Truck

P273D
AP273
AP273V

12-Volt Heavy Duty Truck

UP241D
P241D
501 (for flashing 3 lights on either side)



Whether your fleet is passenger cars, light trucks or the big jobs, the line of Tung-Sol Flashers contains every type you need for signal system service.

Tung-Sol Flashers are the same flashers the overwhelming majority of vehicle manufacturers specify as initial equipment.

Insure the signalling reliability and dependability your fleet must have. Replace with Tung-Sol Flashers!

Tung-Sol Electric Inc., Newark 4, New Jersey.

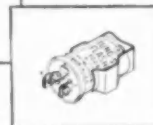


Bracket is attached in place of special flasher mounting.

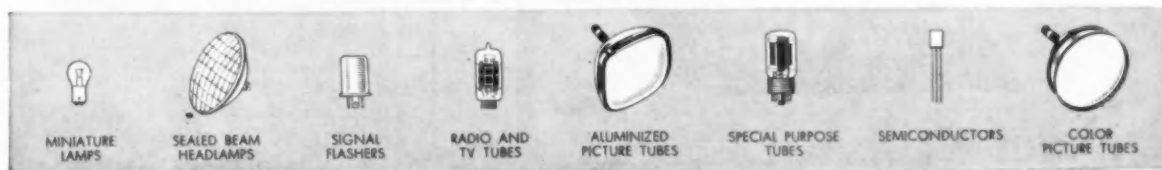
Bracket holds flasher vertically—



—or horizontally.



ts TUNG-SOL SIGNAL FLASHERS



New Products

Continued from Page 206

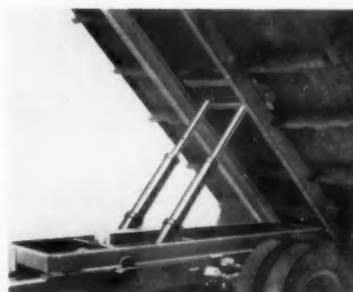
iciency and provide longer life, says the manufacturer. They carry the Underwriters Laboratory and Canadian Standards Assn. approval. They are hermetically sealed to protect against corrosive gases, humidity and oils.

pass systems.

Filter Cartridge

from Bowman Products Co.
850 E. 72nd St.
Cleveland 3, Ohio

is a one-piece replacement unit requiring no loose gaskets for installations. It employs densely packed cotton fibres for sludge and abrasive entrapment, according to the manufacturer. It is said to be suitable for all types of oils, including regular and detergent. For use on full-flow and by-



Telescopic Hoist

from Hercules Steel Products Co.
Galion, Ohio

is designed for field conversion installation. Designated Model No. 2240, it features light-weight construction and forward mounting on the truck chassis to minimize truck frame deflection during dumping. It has a rated capacity of up to 11 tons and is intended for use under bodies up to 14 ft in length. Dumping angle is 45 deg.

Muffler Remover

from Walker Marketing Corp.
Racine, Wis.

is an electronic unit designed to operate on the heat expansion principle to separate mufflers from rusted pipe connections. It uses a 1350 watt, high intensity heat GE tubular element and has an average life of about 75 hours.

Tubeless Tire Valve

from Dill Mfg. Co.
700 East 82nd St.
Cleveland 3, Ohio

when used with the correct washer and one of three extensions, will fit



any size valve rim hole in both 14 and 15-in. rims. It is a clamp-on model.

(TURN TO PAGE 210, PLEASE)

QUALITY

QUALITY

QUALITY

QUALITY

UNEQUALED/QUALITY

TULSA® POWER TAKE-OFF

Years of engineering mastery, manufacturing experience and tough field testing have proved the unequalled quality of Tulsa Power Take-Offs. Precision-made . . . compact . . . powerful, durable and quiet . . . Tulsa Power Take-Offs are foremost with these outstanding features . . . shaved and heat-treated gears, hardened shifter yokes; anti-friction bearings throughout; strong, lightweight heat-treated aluminum housings . . . extremely low prices with nationwide distribution and service. Tulsa assures you unequalled quality in Power Take-Offs sized from single speed, medium duty to multiple speed, heavy duty models.

NEW! WEATHERHEAD ROTARY TUBE FLARING TOOL!

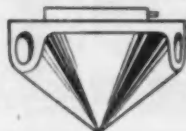
most important advancement in tube working in 20 years!



Automatic tube height gauge to control flaring diameter to S.A.E. Standards. Positions automatically.

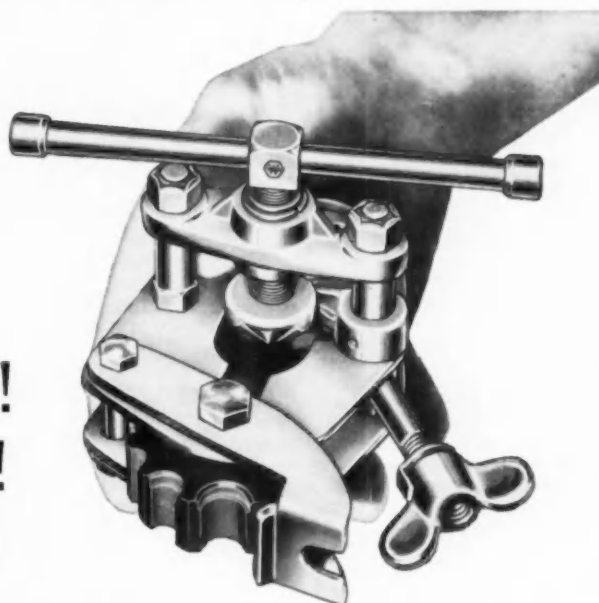


Patented "built-in" rotary clamping dies. Nine popular easy-to-read sizes, $\frac{1}{8}$ " thru $\frac{3}{4}$ ".



Models also available with automatic burnishing attachment and burnishing cone.

**Fast!
Easy!
Accurate!
Compact!
Durable!**



Here's a brand new tool for perfect tube flaring . . . unparalleled in performance. It's faster . . . one piece construction. It's easier . . . "Dial-Matic" tube size selection. It's accurate . . . tube stop automatically controls flaring diameter. It's compact . . . for easy storage. It's durable . . . for years of service.



Spring-Type Benders



Mechanical Benders



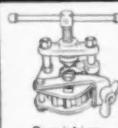
Tube Cutters



Bar-Type Flaring Tools



Swaging Tools



Burnishing Flaring Tools



WEATHERHEAD

The Weatherhead Co., Fort Wayne Division
Dept. C-9, 128 West Washington Blvd., Fort Wayne, Indiana
In Canada: The Weatherhead Co., Ltd., St. Thomas, Ontario

Gentlemen:

Please send me your tool catalog illustrating your complete line of tube working tools.

Name

Company

Position

Address

City State



J-M sealing compounds

*Seal
joints quickly, easily
and permanently*

Johns-Manville Body Sealers are permanently plastic synthetic resin compounds developed for sealing bolt fastened joints against the passage of air, dust, and moisture. They are highly adhesive, will not skin or harden, will not corrode metals and other surfaces, and can be painted after application. Stable under a wide temperature range, they have excellent aging characteristics.

Available in these two types:

J-M Type A Body Sealer, of relatively soft, knife-grade consistency. Supplied in 1½" and 3" dia. pugs, extruded beads (min. diameter ¼") and ribbons (min. thickness ⅛"). Recommended for use in bulk form, this body sealer can be readily extruded on the job.

J-M Type B Body Sealer, of heavier, knife-grade consistency. Supplied in 1½" and 3" dia. pugs, in beads (⅛" dia. up), and ribbons ⅛" up. Supplied packed in flat strips or multiple and single strand reels.

Johns-Manville Body Sealers are supplied in a variety of packages for time saving application. For Sheet EL-67A and Chart EL-72A write Johns-Manville, Box 60, New York 16, N. Y. In Canada, Port Credit, Ontario.



Johns-Manville SEALING COMPOUNDS



New Products

Continued from Page 208

Power Sweeper

from Wayne Mfg. Co.
1275 East Lexington St.
Pomona, Cal.

is designed to sweep shops and parking areas. It has been designated Model No. 604 by the manufacturer



and is only 38½ in. wide. It can sweep a 30-in. swath, uses "Filter-Vac" system that eliminates the dust bag, has automotive transmission and automotive type steering.

Truck Rim

from Firestone Tire & Rubber Co.
1200 Firestone Parkway
Akron 17, Ohio

said to weigh 8 to 12 per cent less than most standard rims is known as the Firestone "Challenger" two-piece rim. Only one piece must be removed to change tires in the simplified wheel design. They are for use with tubed tires.

Spark Plug

from Electric Auto-Lite Co.
Toledo 1, Ohio

incorporates the same dual-heat range design that was first introduced by Auto-Lite in 1955 on its "Resistor" spark plug with "Power Tip". Called the "Auto-Lite Standard Spark Plug with Power Tip," the new plug is designed to give top performance in city as well as open road driving with overhead-valve engines.

Hydraulic Lifter Tool

from Lisle Corp.
Clarinda, Iowa

is designed to remove stuck hydraulic valve lifters. It can be operated as a slide hammer or as a screw puller. Pulling rod is inserted through the (TURN TO PAGE 212, PLEASE)

"THIS LUBRICANT
CUT BEARING
REPLACEMENTS
OVER 40%"



says—HANOVER BUILDING
SUPPLY CO. of Hanover, Pa.

"Before using LUBRIPLATE, we replaced the wheel bearings in over 50% of our trucks each year. Since using it, bearing replacements have dropped to less than 10%. We have also been able to increase periods between chassis lubrications from 500 to 2000 miles. We are very happy over our change to LUBRIPLATE, and heartily recommend it to fleet operators interested in saving money."

HANOVER BUILDING SUPPLY CO.
C. O. Albright, Pres.

**REGARDLESS OF THE SIZE AND
TYPE OF YOUR MACHINERY,
LUBRIPLATE LUBRICANTS
WILL IMPROVE ITS OPERATION
AND REDUCE MAINTENANCE**

LUBRIPLATE LUBRICATION



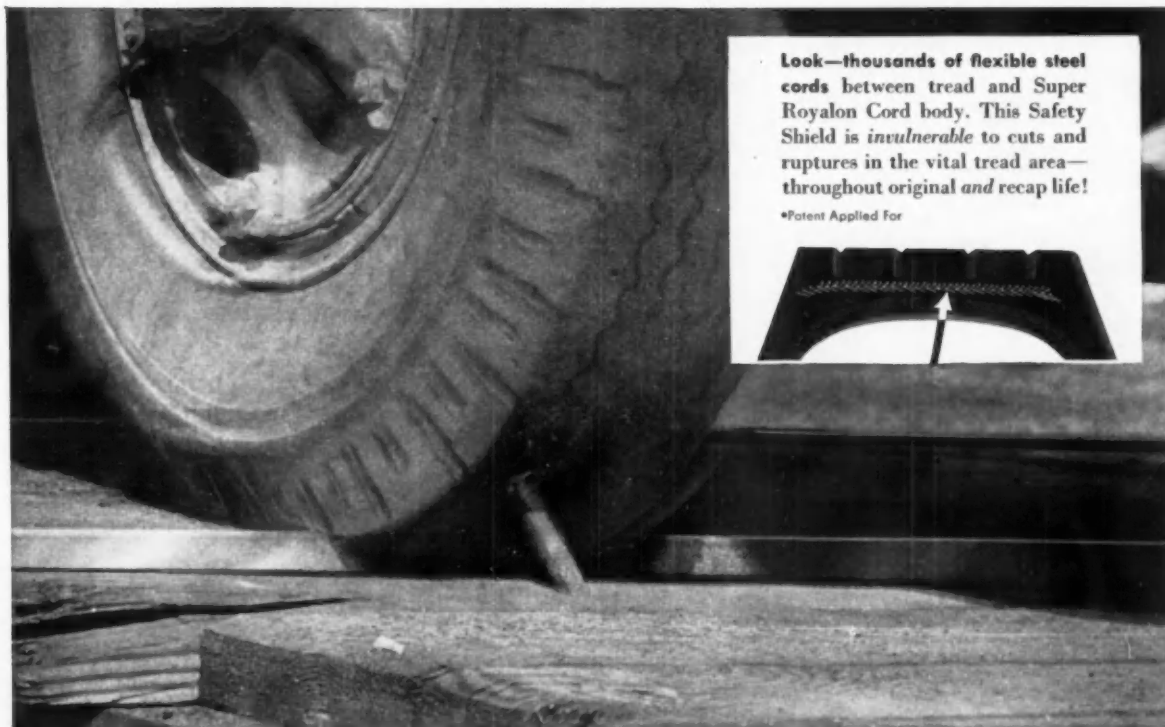
**MAKES CARS
AND TRUCKS
RUN BETTER
AND LAST
LONGER**

LUBRIPLATE H.D.S.
MOTOR OIL... THE OIL
THAT NEEDS NO
ADDITIVES

For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK"... a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



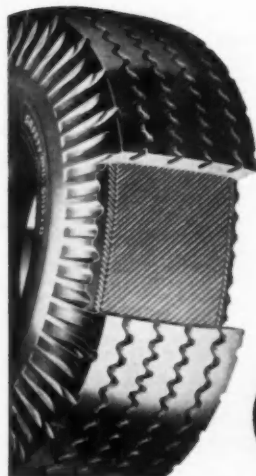
Ready to cap, yet still *Invulnerable* with exclusive **SAFETY *STEEL* SHIELD***



Look—thousands of flexible steel cords between tread and Super Royalon Cord body. This Safety Shield is *invulnerable* to cuts and ruptures in the vital tread area—throughout original and recap life!

*Patent Applied For

U.S. ROYAL ...world's strongest, longest-wearing tires



The tire above, worn almost bare of tread, smashes that vicious spike without rupture. For this new U. S. Royal with Safety Steel Shield—though light in weight and soft of ride—is *invulnerable* to road hazards in the tread area at any level of wear!

It's now priced close to ordinary truck tires. It wears considerably slower, delivers *new economy*. Its steel-shielded body stays "like new" for recap after extra recap. Ask your U. S. Royal Dealer for a demonstration. And specify "Safety Steel Shield" on the new equipment you buy!

Also available in these "Life-Seal" **TUBELESS U. S. ROYALS**

- U. S. ROYAL
FLEETWAY
—for all-around use on the highway
- U. S. ROYAL
Super FLEETMASTER
—the all-wheel, on-and-off-the-road tire



United States Rubber

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See things you never saw before. Visit U. S. Rubber's new Exhibit Hall, Rockefeller Center, N. Y.

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WHEN YOU REPLACE WITH
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OIL FILTER CARTRIDGES
GUARANTEED 5000 MILES
by WRITTEN FACTORY BOND
... YOU PAY ONLY for FULL
5000 MILES of DEPENDABLE
FILTER PERFORMANCE

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to give vital oil purification through 5000 miles of hard engine use . . .
REFILCO's 'PREMIUM-PACK' line of heavy duty oil filter cartridges removes microscopic foreign particles and other contaminants, yet does not affect special additives, 3 popular types, CAN, SOCK, MICRON . . . IN EVERY SIZE . . . ALL TYPES ENGINES . . . GAS or DIESEL.
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ADDRESS _____
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New Products

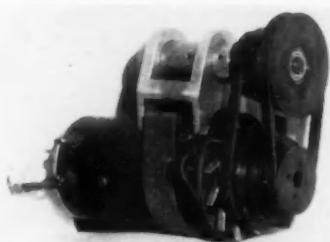
Continued from Page 210

pushrod in the block and attached to the pulling chuck, whose lock-on rims expand in a straight line, assuring positive attachment to all types and sizes of lifters.

Current Control

from Welx Jet Services, Inc.
P.O. Box 11336
Ft. Worth, Texas

attaches to any standard automotive generator to produce maximum electrical current at any engine speed.



Known as the "Gen-O-Drive," it utilizes a stepped pulley arrangement to produce full current at idle to meet excessive electrical demands. It automatically disengages when electrical output from generator is sufficient.

Radiator Cap

from Wayne Metalcraft Division
E. Edelmann & Co.
2332 West Logan Blvd.
Chicago, Ill.

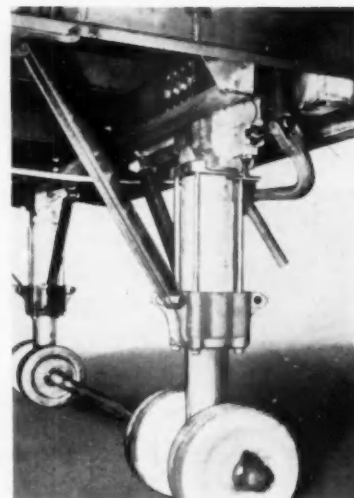
uses a new principle in pressure cap construction by eliminating the rubber gasket and dispensing with the control spring. Rubber gasket has been replaced with a heavy, flexible "chloroprene" diaphragm to provide a continuous, positive seal in spite of nicks, scratches and other damage to radiator filler neck.

Clearance Lamp

from The Griffin Lamp Co.
Hamilton, Ohio

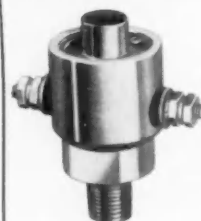
fits the new flat surface cab roofs on Ford, Chevrolet, GMC and International trucks. The clearance-marker lamp hugs the cab roofs from end to end and has a chrome-plated body and pressed cast aluminum base plate. Red or amber lens models fit 6 or 12-volt systems.

New Landing Gear



New vertical supports for trailers by Fruehauf Trailer Co. are designed for one or two-speed control. The supports are 25 lb lighter than previous design and are securely mounted.

I. C. C. REGULATION—193.25 (D)



AVAILABLE
ALSO
IN
BRACKET TYPE
MOUNTING

The Robinson Self-Lubricating

PISTON-TYPE TRAILER EMERGENCY STOP-LIGHT SWITCH

Robinson Trouble free piston type stoplight switch conforms to this I.C.C. Regulation.

THIS IMPORTANT LINK IN THE SAFETY CHAIN MUST NOT FAIL: the diaphragm or cylinder cup type of switch often does fail, due to the inherent weakness of the diaphragm or cup itself, which causes loss of air. THE ROBINSON LOW PRESSURE WARNING and the TRAILER EMERGENCY STOP-LIGHT SWITCHES will outlast present types many times over. They carry a FULL YEAR'S guarantee against failure. Here's why the Robinson switches are longer lasting:

CONTAIN NO DIAPHRAGMS OR CYLINDER CUPS—These new Robinson switches do not operate like present types. They use a piston-type action for much longer life. And they don't require lubrication. This is because the piston is made of a patented material that is self-lubricating, and impervious to the moisture and temperatures encountered.

ROBINSON ENGINEERING AND SALES CO.

14550 Wyoming Avenue • Detroit 21, Michigan

MILESTONES IN POWER PROGRESS

(NO. 2 IN A SERIES)

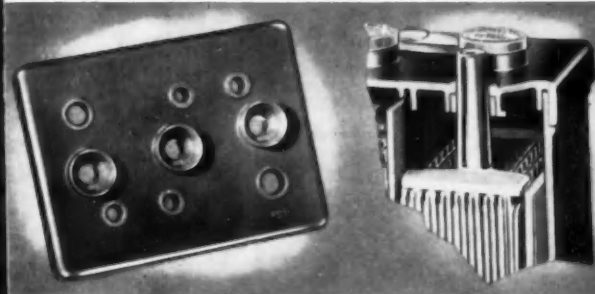
1904—First spark-plug ignition for 4-cylinder motor



1952—First practical one-piece battery cover introduced by GLOBE

The first spark plug ignition set for 4-cylinder engines was a fore-runner of today's complex ignition systems. Globe-Union's pioneering has continually developed batteries for these advanced systems. Typical of Globe's leadership is the one-piece battery cover introduced five years ago. Today one-piece covers are being used more and more to give —

1. Extra battery capacity
2. Greater over-all container strength
3. Better looking batteries



• Note unitized one-piece cover-case construction — brute for strength, less susceptible to damage in handling or distortion from extreme under-the-hood heat — resists vibration from road shock, protects vital battery parts — unharmed by oil and grease • Weld-sealed to case, having tongue and groove joint, triple sealed into one inseparable unit — cell partitions and container are strengthened, reinforced like a battleship to withstand heat and abuse • Another milestone in power — another first for Globe!

FASTER, LOW-COST DELIVERY!

Globe's sixteen plants are strategically located for fastest, lowest-cost shipments to all markets; thirteen (*) are producing creatively packaged dry-charged batteries.

*ATLANTA, GA., *DALLAS, TEXAS, *EMPORIA, KANSAS, *HOUSTON, TEXAS, *LOUISVILLE, KY., *MEDFORD, MASS., *MEMPHIS, TENN., *MILWAUKEE, WIS., *MINERAL RIDGE, OHIO, *PHILADELPHIA, PA., *REIDSVILLE, NO. CAROLINA, *SAN JOSE, CALIF., *HASTINGS-ON-HUDSON, N. Y., LOS ANGELES, CALIF., OREGON CITY, ORE., AJAX (ONTARIO) CANADA



GLOBE-UNION INC.

MILWAUKEE 1, WISCONSIN

If it's Petroleum-powered there's a **GLOBE-BUILT BATTERY** right from the start!

How MALSBAR Y Steam



RINGSBY TRUCK LINES steam clean truck engines and chassis about every 5000 miles to facilitate inspection and reduce fire hazard. Simultaneous 2-gun operation from Malsbary 300 HPC cleaner permits one man to clean with 325° solution, while the other washes with cold water.

**You get
FASTER
cleaning...**

**SPEEDIER
equipment repairs...**

**HOTTER,
MORE POWERFUL
cleaning blast...**

In the fleet field, profits go out the window fast when equipment lies idle. You can greatly reduce truck downtime and make big savings in manpower by using Malsbary steam cleaners. Here's why:

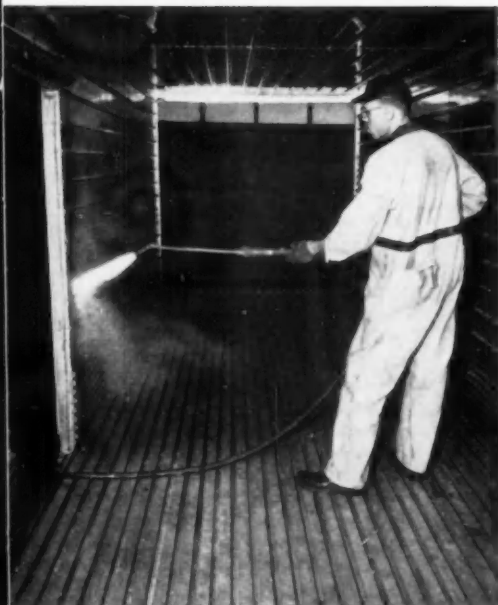
FASTER CLEANING. One man and a Malsbary steam cleaner cleans 7 to 8 times more equipment than he can do manually. In addition, you have a far better job because steam gets into every crack and crevice and it sterilizes and deodorizes as it cleans. Also there's no danger from inflammable or explosive cleaning fluids.

IT'S EASIER TO WORK ON STEAM CLEANED EQUIPMENT... say mechanics. Steam cleaning speeds your entire maintenance program. There's no dirt to wipe off, and maybe fall into crankcase or transmission. Damaged or worn areas show up plainly; assemblies are easier to handle.

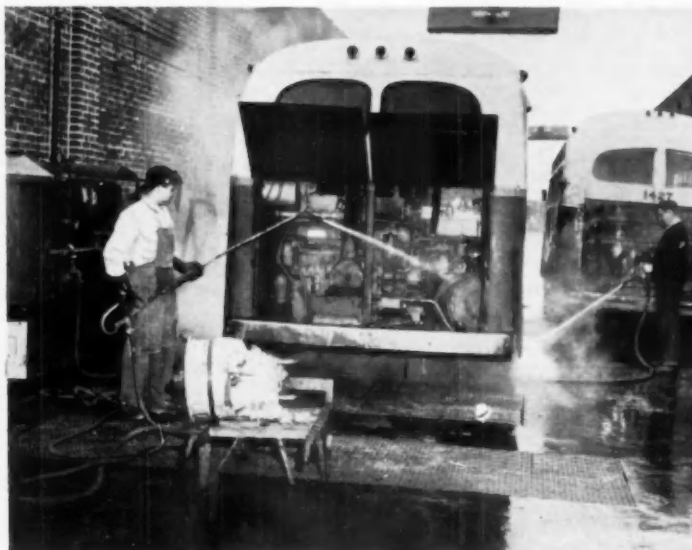
HOTTER, MORE POWERFUL. Only with Malsbary HPC cleaners can you get 240-480 gph. of 325° F. solution at 300-400 psi. This gives you a powerful cleaning blast 100° hotter than any other cleaner, and it's the key to fast cleaning.

Cleaners

**Reduce Maintenance Costs
Improve Equipment Utilization**



SAFeway STORES at Denver clean and sterilize all meat, poultry and milk trucks every day, using 325° F. solution from Malsbary 300 HPC cleaner. It handles 48 trucks in 24-hour day. Safeway bought its first Malsbary HPC in 1947, now owns 10.



PHILADELPHIA TRANSIT uses hot solution gun (left) to clean engine, while cold water gun washes bus body and garage floor. "We get buses out faster because Malsbary cleans off heavy greases, tars, mud, ice and snow with such ease and speed."

SIMULTANEOUS 2-GUN OPERATION. Malsbary Series 300/500 HPC cleaners are the only cleaners on the market that give you simultaneous 2-gun operation—one gun steam cleans or degasses while a second handles cold water work. With HPC models you get these cleaning actions:

1. High pressure hot solution to 300-400 psi. at 325° F. to soften and blast away hard-sticking materials.
2. High pressure cold water to 300-400 psi. for rapid removal of caked dirt, or for cold rinsing.
3. High pressure hot water to 300-400 psi. at 200° F. to rinse equipment or to melt and remove ice and frozen mud.
4. Low pressure wet steam (15-30 boiler hp.) to degas and clean tank interiors or for general heating and thawing.
5. Low pressure warm water for washing trucks, trailers, etc.
6. Simultaneous steam degassing and cold water rinse, from Series 300 and 500.
7. Simultaneous high pressure hot solution and cold water washing from Series 300 and 500.

It's these cleaning actions that enable Malsbary HPC cleaners to handle tough jobs other cleaners can't touch. It's the reason more Class I carriers use Malsbary HPC cleaners than any other make.

MONEY BACK OFFER

See for yourself, on your own job; buy a Model 300 or 500 HPC from your Malsbary dealer. If after 10 days' use you aren't completely satisfied that it reduces truck cleaning costs, return it and our dealer will refund your money. Call him now... or write us for further details and helpful truck cleaning data.



114



Room K9, 845 - 92nd Ave., Oakland 3, Calif.

Speed Truck Tire Changes WITH **JOB-DESIGNED KEN-TOOLS** EASIER...QUICKER

Quality tools for trucks, buses, farm tractors, and aircraft. Hand forged from chrome nickel alloy steel. Tougher, last much longer!

T-19 24" Truck and Bus Straight Spoon

T-20 24" Truck and Bus Curved Spoon

T-29 18" Tool for starting first bead down over rim

T-48A 40" Tool for removing and replacing lock rings

**JOB-DESIGNED
KEN-TOOL LOCK RING REMOVERS**
stand up under tremendous leverage

T-23 24" For Firestone RD, R-1 Rims

T-25 New 18" Ring Remover for 5" Firestone Rims

T-22 18" Combination Lock Ring Tool

T-27 18" Ring Tool for R-1 Rims

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. **THE KEN-TOOL MFG. CO., AKRON 5, OHIO.**

**JOB-DESIGNED
KEN-TOOLS**
TIRE CHANGING
TOOLS KNOWN
AROUND THE WORLD

CAR WASHERS

**AUTOMATIC
ALL PURPOSE
SYSTEM
REVOLUTIONIZES
VEHICLE WASHING**

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CORPORATION
LANSING 5 MICHIGAN

WRITE FOR
INFORMATIVE
FOLDER

SNOW PLOWS

• "V" PLOWS • STRAIGHT PLOWS
• WINGS • TAPER PLOWS
• COMBINATION PLOWS
plus custom designs

write Dept. 1
The Gledhill Road Machinery Co.
Galion, Ohio



As a service to fleet operators, recent major laws affecting commercial vehicle operation both bus and truck are digested here. As reported here, the summary serves only as a guide so the fleetman may check the exact wording of the law through his state truck association or state capital to see how it affects his operation.

California—A turn signal is required on trucks if body or load extends more than 24 in. to the left of the center of the steering wheel (H2318). Driving vehicle with object or load obstructing driver's view through windshield is prohibited (H1991). Vehicle weight limits on city streets may be reduced (H2650). Eighteen poles may now be transported on pole dolly if poles are not longer than 30 ft (H2764). All passenger vehicles, trucks, trailers and semi-trailers of over 6000 lb gross, first registered after Jan. 1, 1958, must be equipped with turn signal lamps of approved type (H2814). Two stop lamps and two tail lamps will be required on all new vehicles first registered after Jan. 1, 1958 (H3164). The financial responsibility law is amended to increase the amounts of required coverage to \$10/20/5000- (H2170). Contents of the vehicle liability insurance policies is prescribed (S. 952). Parking brakes other than mechanical were approved in the Vehicle Code (S2660). Bunk stakes are permissible in hauling loads of lumber (H1688). Urban mass transportation carriers are exempted from tax on gross operating receipts (S1350). A \$10 five-year registration fee was passed for cotton trailers used exclusively as such (H1258). Suspension, amendment or revocation of permits held by household goods carriers receives new regulations (S1070). A chauffeur license or specially-endorsed driver license is required for operation of vehicle with unladen weight of over 12,000 lb or vehicle towing a vehicle with a gross weight of over 6000 lb (H1377). Special license fees were voted for trailers and pipe and pole dollies (S382). Waivers of certain highway user taxes is permitted in areas next to state boundaries (S943). Transportation of explosives is further regulated

(H3705). Vehicle registration fee provisions were amended relative to reciprocity on pro-rata registered vehicles (S1166). Definition of "unladen weight" for commercial vehicles registration purposes is amended (S1079).

Illinois—Splash guard provisions were amended to change specifications for contour splash guards, give exemptions to vehicles purchased before July 1, 1957, and exempt certain types of vehicles from splash guard requirements (H157). Trailers of 3000 lb or less are required to have rear lights and reflectors; all motor vehicles not excepted must be equipped with turn signals; certain trailers are excepted from the requirement of safety certificates; and coupling devices for towing trailers of 3000 lb or less are required (S788). Requirement that truck weight be printed on side is repealed; but specifies that name and address of operator be printed on right side of truck-trailers (H1386). Maximum gross weight of 3-axle vehicle was increased to 45,000 lb if no axle is within 72 in. of another (H644).

New Hampshire—Every vehicle liability insurance policy on a motor vehicle or trailer must have a clause insuring the policy holder against injury or death caused by uninsured or

Classified Advertisements

Exceptional Business Investment, owner disposing entire business, most prosperous New York State area. Land, Buildings, Sales-Service Heavy Duty Trucks and equipment. Valuable territorial franchise. Sales about half million year. Price \$250,000. Apple Co., 1836 Euclid, Cleveland, Ohio.

USED GM71-110 DIESEL INJECTOR PARTS. AL 7120 CARNEGIE, CLEVELAND 3, OHIO.

for greatest
overall economy

**WAUKESHA
ENGINES**

DIESEL • GASOLINE
NATURAL GAS • LP GAS

hit-and-run vehicle operators (H236). Special fees for privately-owned school buses was approved (S13).

New Jersey—Reciprocity between states relative to mandatory motor vehicle equipment was approved (H512). The maximum length for tractor semi-trailer combinations was increased to 50 ft with maximum trailer length remaining at 35 ft (AB471). Trailers and semi-trailers under 3000 lb gross weight are exempted from turn signal requirements if turn signals on towing vehicle are not obscured (H309).

Ohio—Height limit is increased to 13½ ft (H487).

Pennsylvania—Vehicles with "non-divisible loads" up to 102 in. wide are permitted on highways 20 ft or more wide, except on Pennsylvania Turnpike (S729).

South Carolina—A legislative committee is to investigate taxation and regulation of property-carrying vehicles (S96).

West Virginia—Effective June 7, 1957, the combination length limit was increased from 45 to 50 ft and the maximum gross weight limit of 60,800 lb was repealed.

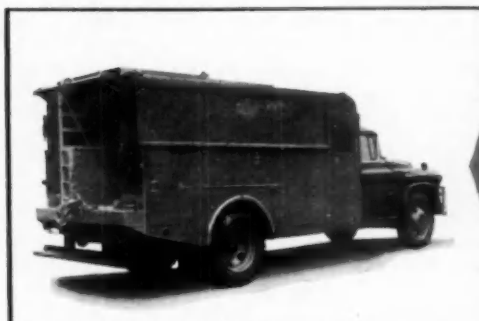
Wisconsin—Use of safety chain or cable, in addition to a coupling device, is required in towing a mobile home or in towing a trailer or semi-trailer by any vehicle other than a truck or truck-tractor (H310). Vehicles carrying waste or "foreign matter" must have loads adequately secured to prevent spillage (H78).

Jeep Retriever Crane



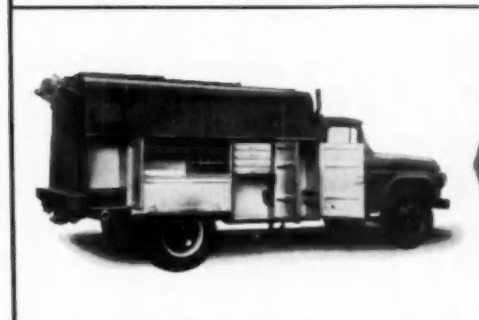
H. S. Watson Co., Emeryville, Cal., is offering its Watson Towboy retriever crane for the adaptation into a low-cost towing vehicle of Willys' new "Forward Control FC-150 and 170," as well as the Universal Jeep and long wheelbase pickup trucks. It is hand winch-operated with a 2-ton capacity. Unit is removeable in 5 min. says Watson.

EXPERIENCED • INTELLIGENT • CAREFUL WORKMANSHIP MAKES STAHL UTILITY BODIES YOUR VERY BEST BUY!



MODEL "500"

Line Construction and Maintenance Body has comfortable Crew Compartment, installs on 2-ton and 3-ton chassis. Body available in 11' to 14' lengths. Here is the Industry's most modern Line Construction Body.



MODEL "300-A"

Light Line Construction and Maintenance Body installs on 1-ton and 1½-ton chassis. Available in 9' to 14' lengths. "300-A" is ruggedly built, handles the BIG JOBS, too!



MODEL "90-V"

A 90° Utility Service Body with full-depth Vertical Compartments of large capacity. Shelf arrangement to suit your individual requirements. Available for ½, ¾, 1 and 1½-ton chassis.

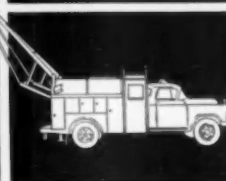
PERSONNEL CARRIERS

SPECIAL BODIES

AERIAL LADDERS

HYDRAULIC DERRICKS

WRITE FOR YOUR
COPY OF COMPLETE
CATALOG...TODAY!



STAHL
METAL PRODUCTS, INC.
3490 WEST 140th ST.
CLEVELAND 11, OHIO

STAHL BUILDS QUALITY BODIES FOR
AMERICA'S BEST-KNOWN UTILITIES



McLean Trucking Co. of Winston-Salem, N. C., received approval from the ICC for the merger of McLean's wholly-owned subsidiary, Carolina Motor Express Lines.

Dallas (Texas) Transit Co. put into operation at the end of July a program to equip 65 additional buses with air conditioning by Thermo-King Corp., Minneapolis, Minn., by April, 1958. The company has been running seven air conditioned vehicles when DTC received authorization to spend \$194,000 in the new program.

Robert N. Herguth has been moved to Pacific Intermountain Express, Emeryville, Calif., terminal as district fleet maintenance supervisor. At the same time Howard E. Harris was named superintendent of the Denver General Shop.

Three key men in the American Trucking Assns. public relations department have recently received pro-

motions. Edwin H. Spencer has been named assistant to public relations manager Walter W. Belson, Bernard A. Goodrich is new manager of press relations, and Martin E. Mosris has been designated as special assistant in the department.

Ryder System, Inc., last month enlarged its territory by 3000 miles with the purchase of TSC Motor Freight Line, Houston, Texas, for \$1,060,493. TSC operates throughout Texas, Louisiana, Mississippi and Alabama.

Haffey Motor Transit, Inc., Summit, Ill., last month received a 10-unit fleet of International Model No. VF-195 trucks. Haffey is the contract hauler for Trumbull Asphalt Co. of Chicago.

Twin Coach Co. has been awarded a \$350,000 engine order from D. C. Transit System, Inc., Washington, D. C., to replace gasoline power plants in the system's buses. The 100 Fa-geol-Leyland diesel bus engines will be used in the firm's modernization program.

Virginia Transit Co. is adding 20 new buses to its operations in Richmond and Norfolk. The 45-passenger vehicles will have air suspension ride,

dual mufflers, foam rubber seats and tinted glass windows.

MK&O Transit Lines last month took over the operation of the Tulsa, Okla., mass transportation system under a 25-year franchise. MK&O succeeds Tulsa City Lines, whose 20-year permit expired June 30.

South Suburban SafeWay Lines, Harvey, Ill., recently placed three new 47-passenger diesel coaches into operation.

Aero Mayflower Transit Co., Indianapolis, Ind., has added to its network of agencies A. D. McMullen, Inc., New Bedford, Mass.; City Pioneer Transfer and Storage Co., Seaside, Ore.; and Carolina Bonded Storage Co., Sumter, S. C.

Fred R. Daniel has been appointed to the newly-created position of director of advertising and public relations for Spector Mid-States, Chicago.

Allied Van Lines has named four movers to its international network of 700 members—Miller Transfer & Storage Co., Cherokee, Iowa; L. Blanchette & Sons, Lewiston, Maine; Fred Qualls Storage Co., Pryor, Okla.; and Wright Truck Line, Stayton, Ore.

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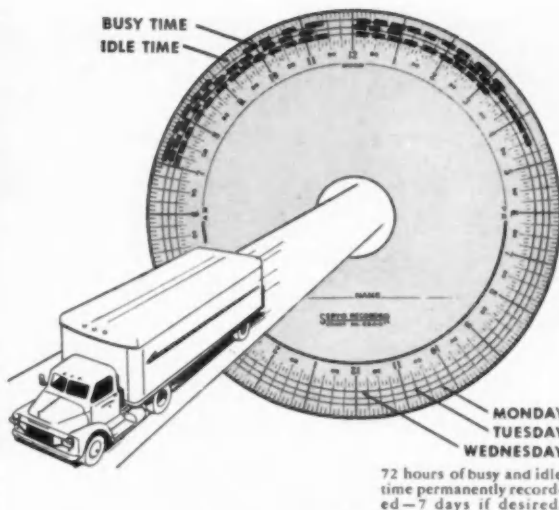
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The Servis Recorder
Tells Every Move Your Truck Makes



Donald O. Mundale, Asheville, N. C., representative for Oakite Products, Inc., New York City, has been transferred to Marion, Ohio, and James E. Davenport has been assigned as representative to Rocky Mount, N. C.

Thor Power Tool Co., Chicago, has bought Drying Systems Inc., Chicago, producer of industrial ovens and process air conditioning installations.

E. V. (Bud) Andrews has been appointed national fleet sales representative for Colorado Kenworth Corp., Denver, Colo.

Robert L. Abel, radio communication chief for American Trucking Association, has accepted the newly-created position of regional sales manager, Mid-Atlantic States, for

Bendix Radio Division, Bendix Aviation Corp., Baltimore, Md.

General Truck & Equipment, Inc., St. Paul, Minn., and Humphrey Truck Sales, Milwaukee, Wis., have been appointed new Four Wheel Drive Auto Co. dealers for sales, parts and service of FWD transport tractors, ready-mix trucks and commercial dump haulers.

John C. Dods, Jr., has been appointed sales manager of the National Accounts Division and Edgar S. Main is the new special assistant to James B. Lightburn, general sales manager, After Market Division, Purolator Products Inc., Rahway, N. J.

West Texas White Truck Equipment Co. has opened a new \$100,000 service center at Odessa, Texas.

William A. Sneed has been appointed general sales manager of Permatex Co., New York City.

Dayton Rubber Co., Dayton, Ohio, and Cadillac Plastic and Chemical Co., Detroit, have merged through an exchange of stock. Cadillac will retain its corporate name and continue to operate under its present management and personnel as a wholly independent subsidiary of Dayton Rubber.

Robert B. Hawkins has been named general sales manager of Zollner Corp., Ft. Wayne, Ind., and will be assisted by Robert Ritchie.

William A. Sneed has been appointed general sales manager of Permatex Co., Inc., New York City.

T. C. Abernethy, Charlotte, N. C., has been appointed sales representative for Strick Trailers, Philadelphia, in the North Carolina area.

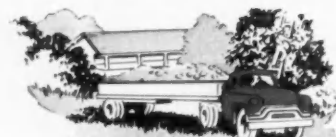
Lindsay Structure Inc. has become the Lindsay Structure Division of International Steel Co. No change was announced in production or in key personnel in the change.

Mack Trucks, Inc., Plainfield, N. J., has announced the appointment of additional distributors in seven states. They include Mitchel Mack Sales, Sharon, Pa.; Evangeline Mack Trucks, Inc., Lafayette, La.; Ben Nelson's Garage, Mason City, Ia.; Capital Auto Body Co., Inc., Madison, Wis.; Mack Sales, Inc., Dayton, Ohio; Lamar Davis Motor Co., Albany, Ga.; and Stockton Diesel Service, Stockton, Calif.

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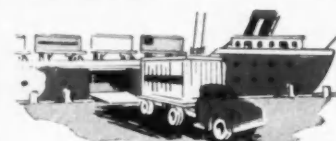
Unit complete with P.T.O., Pump, Shaft-Valves. With special Heavy Duty 5th Wheel.

Load is not carried on cylinders but rolls in track cuts line pressure and ring replacements
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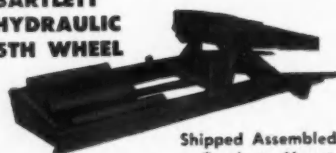


Fishy Back operations could not manipulate economically without this help.



Lift Boom Mounted on 5th Wheel can Boom or Lift any ordinary Tractor and tow in

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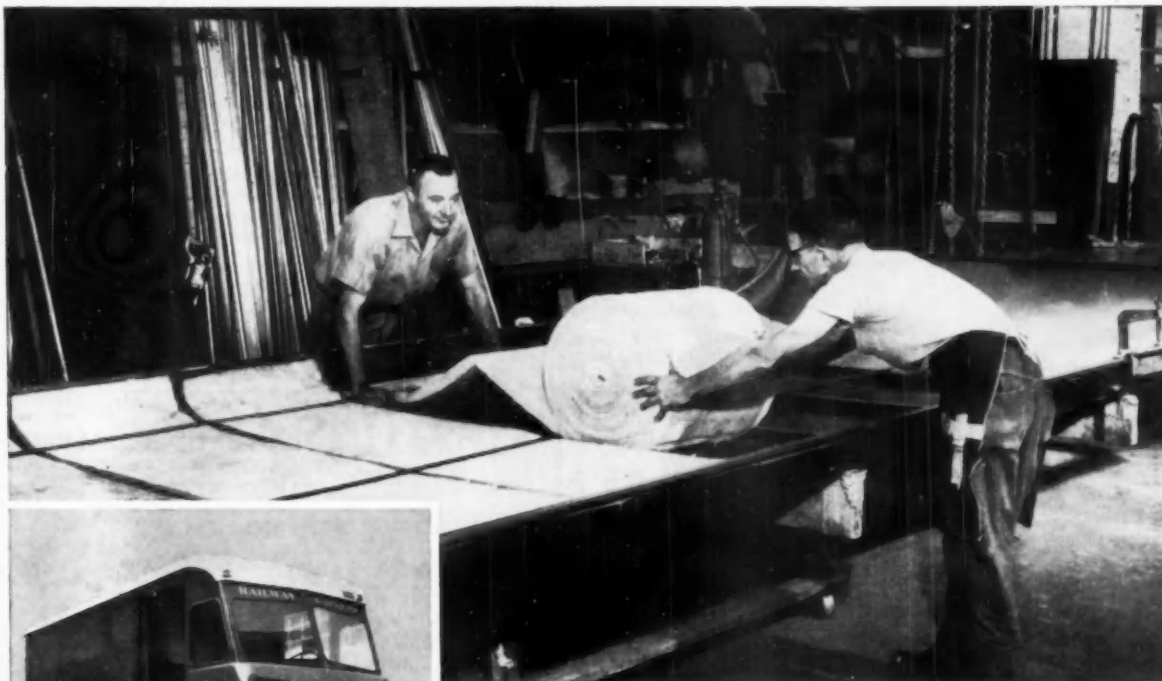
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Pittsburgh Superfine Insulation protects truck cargo from sun heat, provides comfort for driver, is not affected by road vibration.

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That's why York Hoover Corporation, Body Division, York, Penna., uses Pittsburgh Superfine Fiber Glass Insulation for this job. Superfine assures cargo protection, provides comfort for the driver and does not shake loose under road vibration.

NO MORE HANDLING PROBLEMS!

Mr. John R. Stone, Works Manager at York Hoover, reports: "Prior to using Superfine, few men out of our 500-man work force could handle the material formerly used without detrimental effects, particularly irritating skin inflammation. This discomfort caused a lowering of morale. But, the use of Superfine has eliminated this."

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"In addition to the safety and morale factor, Pittsburgh Superfine is easy to work with. It takes less than three minutes to cut and place 120 sq ft of Superfine in a Railway Express truck. Superfine has a negligible waste factor and is reasonably priced," says Mr. Stone.

PITTSBURGH SUPERFINE CAN HELP YOU, TOO!

In Pittsburgh Superfine Fiber Glass you get an economical, easy-to-handle, safe and effective insulating material. If you're not already using Superfine, why not get complete information on how Superfine can give you many advantages? Call your nearest PPG Sales Office, or write direct. There is no obligation. *Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Penna.*

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Central Truck Lines, Tampa, Fla.—to 64 employees throughout its system holding no-accident records of from one to 16 years.

Leaman Transportation and Chemi-

cal Tank Lines, Downingtown, Pa.—to 57 drivers who have operated trucks without an accident for five years or more.

McLean Trucking, Winston-Salem, N. C.—to 476 over-the-road and 450 local drivers holding no-accident records of from one to 16 years.

South Carolina Electric & Gas Co., Charleston, S. C.—to 68 operators with one-year accident-free records, as a salute to the Charleston City Bus System's recent winning of a first

place award in the American Transit Assn.'s traffic and passenger safety contest for 1956.

D. C. Transit System, Washington, D. C.—to 90 bus drivers who completed 10 or more years without a preventable accident for their part in helping the firm earn a top ATA safety award in the 1956 contest.

Service Storage & Transfer Corp., Bluefield, W. Va.—to 19 drivers with from one to three-year accident-free records.



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✓ **AND OUTSIDE . . .** GUNK Super-Concentrate is a heavy-duty degreaser and emulsifier that can be sprayed, brushed or wiped on engines and machinery and then hosed off with clear water. Result: GUNK's self-scouring action has produced a factory-new appearance. It is one of the most remarkable and successful emulsifying degreasing solvents on the market. No toxic vapors, non-caustic, safe to skin.

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NAME
COMPANY
ADDRESS

A	
AC Spark Plug, Electronics Div.	14-15
Albertson & Co., Inc.	222
Aluminum Co. of America ...	45
American Chain & Cable Co., American Chain Div.	143
Automotive & Aircraft Div.	180
American Rayon Institute.	148-149
American Seating Co.	94
American Steel & Wire Div. ...	203
American Steel Foundries (Hammond Div.)	42-43
American Telephone & Telegraph	89
American Viscose Corp.	205
Armco Steel Corp.	108
Armstrong Rubber Co.	129
Auto Specialties Mfg. Co.	
3rd Cover	
Autocar Div. White Motor Co.	187

B	
Bacharach Industrial Instrument Co.	218
Barber's Glass & Mfg. Co. ...	155
Bartlett Trailer Corp.	220
Bean Division, John ...	176
Bell Telephone System	89
Bendix Aviation Corp.	
Products Div.	85
Bendix Westinghouse Automotive Airbrake Co.	58-59
Bishman Mfg. Co.	164
Black & Decker Mfg. Co.	127-218
Blackhawk Mfg. Co.	49
Bonney Forge & Tool Wks. ...	142
Bostrom Mfg. Co.	31
Boyertown Auto Body Works, Inc.	24
Braden Winch Co.	160
Briggs Filtration Co.	223
Brockway Motor Trucks ...	185
Brown Trailers Inc.	120-121
Budd Co.	140-141

C	
Century Gas Equipment Co. ...	192
Champion Spark Plug Co.	158-159
Chicago Pneumatic Tool Co. ...	197
Classified Advertisements ...	216
Cleveland Welding Div. Amer. Machine & Foundry Co. ...	138
Clevite Service Div.	147
Columbia-Geneva Steel Div. ...	203
Commercial Solvents Corp. ...	118
Curran Corp.	223

D	
Dana Corp.	181
Dayton Rubber Co.	
Automotive Div.	179
Tire Div.	135
Dayton Steel Foundry Co. ...	177
Delco Remy Div.	46-47
Diamond T Motor Car Co. ...	117
Dietz Co., R. E.	183
Dill Mfg. Co.	202
Ditzler Color Div.	168
Divco-Wayne Corp.	53

Dodge Div. Chrysler Corp.	2nd Cover
Du Pont de Nemours Co., Inc.	
Nylon Tirecord	174
Zerex & Zerone	62-63

E	
Eaton Mfg. Co.	
Axle Div.	29
Valve Div.	54
Eberhard Mfg. Co.	119
Echlin Mfg. Co.	25
Erie Malleable Iron Co.	182
Evans Products Co.	131
Exide Automotive Div.	109

F	
F & B Mfg. Co.	95
Federal-Mogul-Bower Bearings Inc.	
Bower Roller Bearings Div.	17
Federal Mogul Service Div. ...	134
Firestone Steel Products Co.	133
Fisk Tire Div.	55
Ford Motor Co.	
Truck Div.	166-167
Four Wheel Drive Auto Co.	
Back Cover	
Fruehauf Trailer Co.	165
Fuller Mfg. Co.	169-171-173

G	
GMC Truck & Coach Div.	18-19
G & O Mfg. Co.	225
Gates Rubber Co.	139
General Tire & Rubber Co.	
Kraft	102-103
Gledhill Road Machinery Co.	216
Globe-Hoist Co.	151
Globe-Union, Inc.	213
Goodrich Tire Co., B. F. Div.	
of B. F. Goodrich Co.	226
Goodyear Tire and Rubber Co.	
Airfoam	4
Truck Fire Dept.	38-39
Gould-National Batteries, Inc.	97
Grote Mfg. Co.	204
Gulf Oil Corp.	114-115

H	
Hackney Bros. Body Co.	136
Hansen Mfg. Co., A. L.	41
Hastings Mfg. Co.	21
Hawkinson Co., Paul E.	16
Hertz Truck Rental System. ...	161
Highway Trailer Co.	126
Holland Hitch Co.	200-201
Hoof Products Co.	106
Hunter Mfg. Co.	178
Hygrade Products Div.	40

I	
International Harvester Co.	64-65

J	
Johns-Manville	152-153-210

Index to

This Advertisers' Index is published of the advertising contract. Every rectly. No allowance will be made

K	
Kaiser Aluminum & Chemical Sales, Inc.	22-23
Ken Tool Mfg. Co.	216
Kester Solder Co.	107
Kim Hotstart Mfg. Co.	223
King-Seeley Corp.	124
Kinnear Mfg. Co.	116
Kold-Hold Div.	188-189

L	
Lee Rubber & Tire Corp.	13
Linde Co. Div. Union Carbide Corp.	206
Lubriplate Div. Fiske Bros. Refining Co.	210

M	
Mack Trucks, Inc.	93
Magnus Chemical Co.	130
Malsbary Mfg. Co.	214-215
Marquette Mfg. Co.	162
Mechanex Corp.	178
Meyercord Co.	219
Midland Steel Products Co. ...	163
Monarch Road Machinery Co.	222
Moraine Products Div.	104-105
Morrison Service Body Div. ...	219
Mount Vernon Mills Inc.	199

N	
National Tube Div.	203

O	
Oakite Products, Inc.	12
Olson Corp., J. B. E.	1
Onan & Sons Inc., D. W.	225
Owatonna Tool Co.	112

P	
Packard Electric Div.	110-111
Perfect Circle Corp.	32
Permatex Co., Inc.	128
Pittsburgh Plate Glass Co.	146-221
Polar Hardware Mfg. Co. ...	222
Practical Mfg. Co.	222
Prior Products, Inc.	132

R	
Ramsey Corp.	186
Raybestos Div. Raybestos-Manhattan Inc.	51
Refill Filter Co.	212

Advertisers

as a convenience, and not as part
care will be taken to index cor-
for errors or failure to insert

Reo Motors, Inc.144-145
Robinson Engineering & Sales
Co. 212

S

Schrader's Son, A. 125
Sealed Power Corp. 8
Seiberling Rubber Co. 193
Service Recorder Co. 219
Shell Oil Co.122-123
Shuler Axle Co. 91
Signal Stat Corp. 99
Snap-on Tools Corp. 61
Snyder Tank Corp. 20
Stahl Metal Products, Inc.... 217
Standard Motor Products,
Inc. (Hygrade Prod. Div.) 40
Standard Oil Co. (Calif.) ... 30

Standard Oil Co. (Indiana) .26-27
Sterkel Tandem & Belt
Drive 198
Stewart-Warner Corp.
Instrument Div. 150

T

Tennessee Coal & Iron Div. .. 203
Texas Co. 6-7
Thor Power Tool Co. 137
Timken Roller-Bearing Co. .. 175
Trailmobile Inc.190-191
Tranter Mfg. Co.188-189
Truckstell Mfg. Co. 223
Tulsa-Winch Div. 208
Tung Sol Electric Inc. 207
Turner-Halsey Co. 199

U

Union Carbide Corp. (Linde
Co.) 206
United Motors Service 170
United States Rubber Co.
Batteries 37
Fisk Tires 55
Royal Tires 211
United States Steel Corp. ... 203
United States Steel Supply
Div. 203
United States Treasury
Dept. —

V

Van Norman Auto. Equip.
Co. 184
Victor Mfg. & Gasket Co. ... 113

W

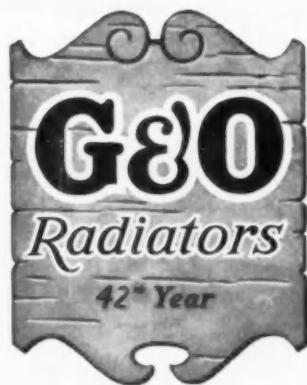
Wagner Electric Corp.
Air Brakes 52
Brake Parts10-11
Tachographs 101
Waukesha Motor Co. 216
Wausau Motor Parts Co. 48
Weatherhead Co. 209
White Motor Co.156-157, 187
Wilco Company 28
Wilkening Mfg. Co. 57
Wohlert Corp. 216
Wood Co., John 172

Y

Yankee Metal Products
Corp. 3
Youngstown Steel Car
Corp. 222

Z

Zollner Corp. 154



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cuts cooling costs**

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Keeps any size cab
comfortably cool...
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or during stops.



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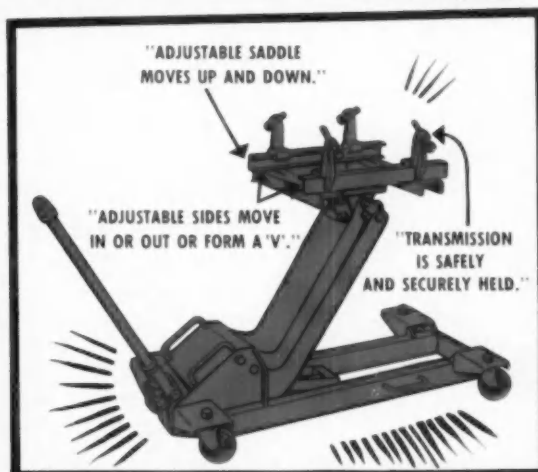
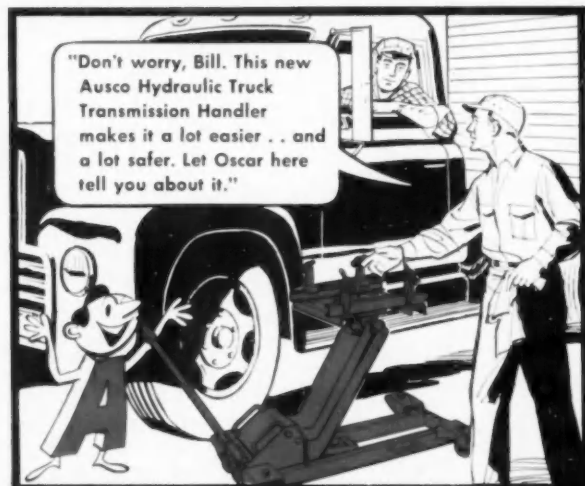
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Specify B.F. Goodrich tires when ordering new trucks or trailers



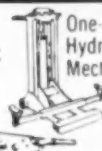
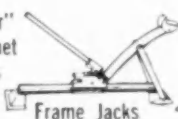
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